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ORIGINAL LECTURES.

**HÆMATURIA OF THREE YEARS' STANDING,
PROBABLY OCCASIONED BY A VILLOUS TUMOR OF THE
VESICAL SURFACE OF THE PROSTATE AND POS-
TERIOR WALL OF THE BLADDER.**

A Clinical Lecture.

By JOHN ASHHURST, JR., M.D.,
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(Reported by Louis J. Lautenbach, M.D.)

GENTLEMEN: The patient who comes before us this morning is a man who presented himself at the Medical Out-patient Department, and who has been referred to me by Dr. Musser. The case is interesting as concerns the question of diagnosis. The patient has a very anæmic appearance; in fact, he has more than this, he has a cachectic appearance—such an appearance as is usually connected with grave visceral disease.

His history is that for the last three years the urine which he passes has been very thick and red; it is now, as you see by this specimen, full of blood, with a number of clots. At times the clots, during micturition, become wedged in the urethra, forming an obstruction, and causing for the time being retention of urine, and it often occurs that it is only by prolonged straining that the passage is cleared. Sometimes the urine is clear, as far as blood is concerned, but there is always a large deposit on standing. It is evident that this hæmaturia must have a definite cause, and it is this which we will endeavor to determine. The presence of blood in the urine may signify a great many different things. The blood may come from the kidney, being associated with some disease of that organ; in this case, unless there were very free bleeding indeed, it would not give such a bright color as we have here. The color of the urine when bleeding occurs from the kidney is usually a smoky hue. We notice this "smoky urine" frequently in the Bright's disease following scarlet fever. Unless the bleeding from the kidney is very profuse, we do not have the tint deep enough to be even a decided red. Sometimes from the appearance of the clots in the urine, we can get an idea of where the bleeding comes from. If the bleeding comes from the kidney, the clot, when floated out in water, may assume the shape of the pelvis of that organ; but in order to allow a clot of this size to pass, the ureters must be much dilated. Sometimes we find a long, thin clot, assuming the shape of the inside of the ureter itself; and then it is a fair inference that the bleeding comes from the ureters. Here, in this case, however, the clot has no definite shape.

Besides these two sources, the blood may come from the bladder itself. If in examining these clots we find that they are soft and easily torn, showing them to be recent, and that they have no definite shape, they may probably come from the bladder. Vesical hemorrhage may be due to the presence of stone, but this is not very usual in adults, occurring more frequently in children. Especially is stone liable to occasion hæmaturia when the stone is composed of oxalate of lime or when its surface is made up of sharp crystals of uric acid, which sometimes form little prongs or projections. The bleeding from calculus is increased by taking exercise, and especially by horseback riding, or by driving over a rough road. Stone is, however, much less

frequently the cause of bleeding than would at first be supposed.

Vesical bleeding, again, may come from acute inflammation—cystitis—causing hemorrhage just as we see it produced in other inflammations of mucous membranes, as in very severe sore-throats, and in the early stages of pneumonia. Were this patient suffering from acute cystitis, however, he would have fever, and his general condition altogether would be different. He would beside have intense pain in the region of the bladder, nor could the disease have lasted as long as he has had the hemorrhage. Other causes of hemorrhage from the bladder are villous growths, which are very vascular, bleeding upon the slightest touch, or even without any external injury, simply from excessive congestion.

Carcinoma of the bladder as a primary affection is excessively rare. I have seen but one case of it, and in that case there was at no time any hemorrhage, the patient dying before the growth had involved the vesical mucous membrane. Were this a case either of carcinoma or sarcoma of the bladder, we would probably feel a decided tumor immediately above the pubis, but here there is no tumor to be felt. Another source of vesical bleeding may be tubercle of the bladder, which, however, is rare, and probably never exists except in cases of general tuberculosis.

Hæmaturia again may be occasioned by disease of the prostate or of the urethra. Were the hemorrhage caused by disease of the urethra, the blood would come before the urine. Should the hemorrhage come from a diseased prostate, while some blood would still precede the urine, another portion would be more thoroughly mingled with the urine than would be the case were the bleeding dependent upon urethral disease, but it would not be so intimately mixed as we find it in disease of the bladder. Here the blood is tolerably well mingled, and yet the clots come before the urine, as the patient tells us that, when he first attempts to pass water, they sometimes prevent urination by their lodgement somewhere along the course of the urethra.

In this case, then, the diagnosis narrows itself down to either some morbid condition of the prostate, or some morbid condition of the neck of the bladder, probably a villous growth.

The prostate may be the seat, either of some malignant growth or of simple enlargement. Hemorrhage from the prostate does not necessarily imply the existence of malignant disease. I remember a case in which the catheter was introduced, where there was an enlarged prostate, and in which pure blood flowed in a stream through the instrument. The patient dying some time afterwards, the autopsy revealed a simple hypertrophy of the gland.

This man had an instrument passed two or three weeks ago, and it gave him a great deal of pain; I have therefore promised him to pass the sound with which I intend to explore his bladder as gently as possible, and, if its use should prove very painful, to desist from its employment. On making a rectal examination without the use of the sound, I find that there is certainly no very great enlargement of the prostate in the direction of thickness; certainly not more than we frequently find at this age (forty-eight years). Now, on introducing this sound, which is a very small one, I find that there is a very irritable condition of the urethra, this being first noticed just within the glans.

Having introduced the sound, I will again examine the prostate and neck of the bladder by placing a finger in the rectum. I know by the way that the instrument went in that there is enlargement of the prostate, and this is also shown by the position of the sound, deeply buried in the urethra, while the handle only is visible. There is no marked enlargement in the direction of thickness, but there is decided increase in the long axis. It is very probable that there is here a villous tumor involving both the neck of the bladder and the vesical surface of the prostate, which, as we know, are frequently similarly involved.

While the instrument is in the bladder, I will take the opportunity to ascertain, if possible, whether a stone is present. I find no stone, but cannot make a thorough exploration, as every movement of the sound is met with considerable resistance, and gives the patient pain.

Our diagnosis, as far as it can be made, is that, besides the obvious prostatic hypertrophy, there is a tumor involving the surface of the prostate, and probably also the posterior wall of the bladder. Of the precise nature of the tumor we cannot be certain. By microscopic examination of the urine, we might possibly find fragments of a villous tumor; but if such fragments were not found, still their absence would only be negative evidence, and would not prove that the tumor was not of that character. The growth is probably neither a scirrhus nor a sarcoma, both of these being attended with a greater degree of hardness. If it were possible, moreover, for either of these diseases to exist for three years without destroying its subject, we would probably find other parts also involved; but there is not the slightest evidence of this here. The growth is probably a villous tumor, or perhaps a papillary form of epithelioma; the exact diagnosis could be made by the microscope alone.

As regards treatment, the tendency in recent years has been to resort to an operation in these cases, to confirm the diagnosis; and, if a tumor is found, to endeavor to remove it. One operation which has been employed is the opening of the bladder above the pubis; another is to make the incision as in lateral lithotomy. Either of these operations would be attended with considerable danger. Suprapubic cystotomy is always accompanied with risk, and the lateral operation, requiring division of the prostate, would in a case like this be followed by very free bleeding. A better operation, under these circumstances, would be that recommended by Sir Henry Thompson. A median incision is made in the perineum, opening the urethra in front of the prostate; this incision would not involve any part of the tumor, but would allow the introduction of a finger to explore the bladder, and, if a tumor were found, probably a considerable part could be scraped away with a small scoop or curette. A palliative mode of treatment, which, however, would be contra-indicated here by the very irritable condition of the urethra, would be the frequent injection, through the catheter, of nitrate of silver solutions, or other astringents, of gradually increasing strength.

ORIGINAL ARTICLES.

THE USE OF CASCARA SAGRADA IN HABITUAL CONSTIPATION.

BY HERBERT C. ROGERS, M.D.,

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CASCARA sagrada was brought to professional notice about the year 1878. In small doses I find it has a tonic action. It gives tone to muscular

tissue, and exerts some influence on the liver. In large doses it is a purgative, acting specially on the large intestines. It increases the intestinal secretions, and also the peristaltic action of the bowels. The extract of belladonna and purgatives increase its action. I have, during the past year and a half, prescribed cascara a great many times, and have found it a reliable and valuable medicine. It is chiefly in chronic constipation that I prescribe cascara. In habitual constipation, it is one of the very best laxatives we possess. To persons of a sedentary occupation, with constipation and general sluggishness of the bowels, the administration of the fluid extract of cascara sagrada, in small doses, will generally be very beneficial.

I usually give the fluid extract in from twenty to thirty minims, in a little coffee, night and morning, until it begins to act, when I diminish the dose, and also omit giving it in the morning. Some persons may object to taking the fluid extract on account of its bitterness. To such persons I am in the habit of giving the cordial of cascara, and I think that it is also better suited for children and babies. The only reliable preparation that I have been able to find is that made by Parke, Davis & Co., of Detroit, Mich. Their preparations of the fluid extract and cordial have given me entire satisfaction.

The following are a few of the cases in which cascara has been used with success:

CASE I.—Chas. Z., aged 9; U.S. From birth he appeared to be a strong, healthy baby. When eighteen months old, he had summer trouble, which left him in a weakened condition. At the age of five years, he had what the doctors called typhoid fever; he was sick two months. Since that time he has had more or less trouble with his bowels. He would go a week without any movement; then, after taking a cathartic, he would suffer from a diarrhoea, which would last a week or ten days, and would leave him in such a weak condition as to compel him to go to bed.

March 3.—Present condition: loss of appetite, cachectic, with yellow, anæmic complexion; pain over abdomen; bowels distended; has not had a movement since February 28, although the mother has given him several cathartic medicines. I told the mother to give the patient a sponge bath, night and morning; to commence with warm water, and gradually lower the temperature until the thermometer indicated 60° Fahr.; to give him milk and lime-water. Ordered the fluid extract of cascara sagrada in fifteen minim doses, in a little coffee, every three hours, till the bowels moved freely; also to take thirty minims of dialyzed iron three times a day.

5th.—Mother reports that the boy's bowels have moved three times since the morning of the 4th, the last time very freely. Told her to keep on as before, with the exception that she is to give of the cascara fifteen minims night and morning, and report to me in one week.

13th.—Patient called with his mother this morning at my office. He looks better, and says he feels better. The bowels have moved two or three times

a day since last note; appetite improved; sleeps better at night; complained of the bad taste of the medicine, and asked me if I cannot give it in pill form. If I cannot, he will try and take it. Will not give it up, as he says it is the only thing that has helped him since he began to suffer from this trouble. I gave the cordial in place of the fluid extract.

April 2.—Met the patient on the street. His mother says he was never better; his bowels move once or twice each day; appetite is good; has not taken any of the medicine for the last week. I advised the mother to give him the medicine whenever he showed signs of a return of his old trouble.

Here was a case of constipation in a boy which had lasted nearly four years. He had taken various remedies and combinations with little or no success. I must confess I had but little faith in the preparation. The result, however, has been most gratifying, both to the parents of the child and to myself.

CASE II.—Harry O., male, aged ten months; has suffered from constipation ever since birth. The mother has tried several domestic remedies, with but little success. I told the mother to give him thirty minims of the cordial of cascara sagrada night and morning, every other day, until his bowels moved naturally. A few days later, the mother called at my office, and said that the medicine not only helped baby, but herself also, who was troubled with constipation.

CASE III.—Frank B., aged 50, called at my office July 6. He has been on a *spre* for the last week. He has been unable to keep anything on his stomach for the last two days. Bowels have not moved for nearly a week; muscles flabby and tremulous. Ordered fluid extract of cascara for his constipation, and ten minims each of tr. capsicum and tr. of nux vomica in Vichy water three times daily—the cascara to be taken night and morning.

July 7.—Patient says he is better; vomited the first two doses of the capsicum and nux vomica; has been able to retain the cascara. Bowels have not moved, although he has some pain. I told him to continue as before, and report to me in two or three days.

10th.—Patient called at my office this morning. He said that his bowels had moved freely on the afternoon of the 7th. Has been taking one dose of cascara daily since. I told him to omit the medicine as long as his bowels moved freely once a day, but to continue on with the nux vomica and capsicum for another week. Met patient a few days ago. He told me he never had taken such medicine; that both he and his wife had been great sufferers from constipation, but that the medicine had cured them completely.

CASE IV.—*May 3.*—Was sent for to see H. R., a young lady, aged 24, suffering from obstinate constipation, which had continued for a period of over two weeks. She had been treated previously to my visiting her by purgatives, which produced pain and vomiting, and a feeling of general uneasiness, together with ineffectual efforts to have an evacuation.

Ordered milk and lime-water and one teaspoonful of cordial of cascara every three hours, until the bowels begin to move.

4th.—Patient's bowels have moved once since yesterday; is suffering some pain; has not vomited since last evening. Advised the same treatment to be continued as was ordered yesterday.

5th.—Patient says she feels better. Since the afternoon of the 4th, her bowels have moved four times, the last time very freely. I told the patient to omit the cascara as long as the bowels moved once daily, but to resume it whenever she went over one or two days without a movement.

A family, consisting of father, mother, and two daughters, one thirty, the other seventeen, all suffers from constipation, took cascara with the best of results.

I might go on naming case after case, but I think the few above quoted are sufficient.

It is well to remember that the medicine is to be used in small doses, and special attention should be given to see that the preparation is reliable. I have been disappointed two or three times in the use of what proved to be poor preparations.

ON THE VALUE OF A LOTION OF SULPHIDE OF ZINC IN THE TREATMENT OF SUPERFICIAL LUPUS ERYTHEMATOSUS.¹

BY LOUIS A. DUHRING, M.D.,

PROFESSOR OF THE DISEASES OF THE SKIN IN THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

I DESIRE to direct attention to the value of a certain zinc sulphide lotion in the treatment of some forms of lupus erythematosus. It may here be stated that I have found it useful in what may be termed the inflammatory superficial form of the disease, occurring either in discrete or in confluent patches of recent or of long duration. Where the morbid process has settled deeper in the cutaneous structures, and where there is but little tendency to variation from month to month, other more stimulating remedies will prove more serviceable. Every practitioner has doubtless encountered instances of this disease in which the usual, for the most part stimulating, remedies have been of no value. In the majority of these cases they will be found to be positively injurious, inflaming the skin, and causing the diseased areas to spread. Such has been my experience. Any new remedy or formula, therefore, which for these peculiar cases offers hope of relief, must prove welcome to both patient and physician. The striking good which has followed the use of this remedy in several cases that have recently been under my care induces me to present this note. I do not wish to claim for it any specific power over the disease, nor to say that it will cure. I merely wish to speak of it as a highly useful remedy, which in some cases has proved the only application that has at all benefited the disease. I was first led to prescribe it because of the service it had rendered in the treatment of seborrhœa of the face.

¹ Read before the American Dermatological Association, at the Seventh Annual Meeting, August 29, 1883.

The lotion consists of equal parts of sulphate of zinc and sulphuret of potash, in the strength of from five to fifteen grains each to the ounce of water, together with the addition of a variable quantity of alcohol. Ether may also often be added with benefit. I am in the habit of using the following formula: Take of sulphate of zinc and sulphuret of potash each thirty grains; rose-water, three fluid-ounces and a half; alcohol, three fluidrachms. If this strength agree with the skin, the two active ingredients may be increased to the amount of a drachm each to four ounces of the fluid. More alcohol may also be used, to the extent of one ounce to three of water. A few minims of glycerine to the ounce may sometimes be added with advantage. The lotion, which contains a light-grayish, pulverulent sediment, should be shaken before using, and applied lightly to the part for from five to twenty minutes by means of a sponge or a rag mop, allowing the sediment to adhere to the surface. The immediate effect is usually cooling and soothing. The application may be repeated two or more times in the twenty-four hours. The skin should first be cleansed of scales by means of soap, the milder soaps sometimes proving more beneficial than the stronger soft soaps.

The following note by Dr. L. Wolff, pharmaceutical chemist, of Philadelphia, explains briefly the chemistry, as well as the best method of making the compound.

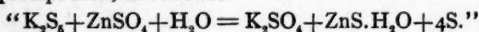
"When equal parts of zinc sulphate and potassium sulphide are mixed together in the presence of water, a double decomposition takes place, resulting in zinc sulphide, potassium sulphate, and precipitated sulphur. The zinc sulphide thus formed is a hydrate, and of a white, pulverulent appearance.

"When the two are to be combined in a lotion with water, they are best dissolved separately in half the prescribed quantity of water each, and then the two solutions poured together. When the liquid, however, consists of alcohol, or alcohol and ether, the two salts must be rubbed down fine first, whereupon a small quantity of water is added, just sufficient to allow the reaction to take place, which is known by the white appearance of the mass; the alcohol is then added, and lastly the ether.

"As there are five potassium sulphides, according to the quantity of sulphur in the combination, the results will vary as to the amount of precipitated sulphur present. Of these sulphides, the trisulphide and the pentasulphide are the most common. The potassa sulphurata of the United States and British Pharmacopœias are, according to their composition, principally trisulphides, and if these are employed, two equivalents of sulphur will be formed, as shown in the following formula:



"Again, if potassium pentasulphide is employed, an excess of four equivalents of sulphur would be precipitated, as follows:



I shall now briefly refer to three cases in which the beneficial effects of the lotion were striking:

About a year ago, Mr. W., aged 45, presented himself to me, exhibiting six or eight dull-red, chronically inflamed, slightly scaly, irregularly rounded, ill-defined patches of lupus erythematosus. The lesions were the size of peas and small beans, and were scattered over the face. They had existed eight months, and were subject to considerable variation. The patient had, at different times, been under the influence of arsenic, mercury, and iodide of potassium, and locally had used mercurial ointments—all without benefit. I prescribed an ointment of precipitated sulphur, one drachm to the ounce, which in a few days caused heat, and increased redness. Subsequently, tar ointment; oil of cade; liquor carbonis detergens; an ointment of calomel, thirty grains to the ounce; ointments of pyrogallie acid, thirty and sixty grains to the ounce; an ointment of iodoform; tincture of iodine, were all used, with the result that, in every instance, the disease was made worse. The zinc sulphide lotion was now ordered, and gave almost immediate relief, the skin, in the course of a few days, becoming paler and less scaly, accompanied by a decrease in the subjective symptoms. Improvement continued under the use of the remedy, but, as cure did not follow, other applications, including solution of chlorinated soda, acetic acid, lead and mercurial plaster, alcoholic solution of salicylic acid, carbolic acid, ether and rhigolene spray, and the use of the curette, were resorted to. All proved of not the least value, while many were injurious. The zinc sulphide lotion was the only remedy that in any degree favorably influenced the disease. Some of the lesions disappeared under its use, and all were benefited.

Another case, of the butterfly form of the disease, in a gentleman from Virginia, forty-six years of age, of two years' duration, who has lately been under treatment, was very markedly benefited by the remedy, other applications having previously failed to influence the disease favorably.

A third case may be mentioned, that of a man, aged 30, who was admitted to the clinic of the University of Pennsylvania a few months ago with an unusually extensive development of the disease of five years' duration, involving the greater part of the face. The erythematous element was marked, there being but very little sebaceous glandular involvement.

In the course of a week, a remarkable change for the better took place under the lotion; in three weeks the improvement was even more decided, so much so that the patch was broken up here and there, and apparently sound skin was in some places beginning to show itself.

AN EXTRAORDINARY CASE OF POPLITEAL ANEURISM.

By J. F. HEUSTIS, A.M., M.D.,

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FRANK R., a mulatto man, thirty-one years old, while lifting heavy timber, in June, 1882, felt something give way in his ham, and soon after noticed a small pulsating tumor (no larger than an English

walnut, at first) in the popliteal space. In August (1882) it began to grow rapidly; and in another month became so large, and caused so much pain, that he had to give up work and take to his bed.

When he was first seen by me, in April, 1883, the tumor not only filled the popliteal space, but bulged so largely as to cause great tension. It was elastic, and presented to the touch an undecided feeling of fluctuation, but no pulsation on pressure or manipulation; but when the ear was applied to it, a strong, deep *bruit* was heard.

The tumor was so large and tense, that it was feared that, if ligature of the femoral artery were resorted to immediately, gangrene of the limb would result; and it was determined to apply compression for a while; not so much with the expectation of effecting a cure by it, but to establish a sufficient collateral circulation to maintain the vitality of the limb after ligature.

The means employed for keeping up compression were very simple and efficient. A small solid India-rubber ball, set into and screwed fast to a square block of wood, was placed upon the artery in Scarpa's triangle, and a small tin can (holding about a quart) partly filled with shot was set on it and held in place by the patient. The quantity of shot in the can was measured by the disappearance of the *bruit*. As soon as the pain caused by the pressure became severe the ball was moved a little higher or lower, and in this way continuous and steady pressure was kept up during the day, but left off at night. For seventeen days compression was kept up (and very seldom could any *bruit* be heard while the ball and shot were in place), but at the end of that time the blowing sound could be heard as distinctly as at first.

A few days after discontinuing compression, the femoral artery was tied at the apex of Scarpa's triangle, and immediately all sound disappeared. But there was no diminution in the size of the tumor, nor did it solidify. And although the man was easier than before the operation, he still suffered severe pain at times.

As the pain continued, the size of the tumor remained undiminished, and the feeling of fluctuation remained, the idea that the tumor had suppurated grew stronger, and it was determined to lay it open and turn out its contents.

Six weeks after the ligature of the femoral artery, the operation of cutting open the tumor was performed. To guard against hemorrhage, Esmarch's rubber cord was applied a little above the tumor, and an incision about three inches long was made into it. At first, only soft black coagulated blood was removed (which had given the sensation of elasticity and fluctuation), but the coagulæ became firmer and firmer in the deeper part, until they became as firm as flesh and strongly adherent. So strongly did the deepest layer adhere, here and there, it was thought best not to tear it away, for fear of hemorrhage or other damage. There was no sac, and it was evident that it was a diffused aneurism. Circumscribed at first, and becoming diffused by bursting, reaching up and filling all the space between the flexor tendons of the thigh above, and down to

the bulge of the calf below; and the mass of blood, coagulating, effaced the distinctive sign of an ordinary aneurism, viz., expansive pulsation. The quantity of coagulated blood and solidified fibrin removed amounted to apparently a quart. After the clearing out of the whole popliteal space a great cavity was left reaching to the bone, which could be felt at its bottom. This was syringed out with carbolized water (3ij to the Oj) and the rubber cord was removed. There was no hemorrhage. A large wisp of horsehair soaked in the same carbolized water was inserted, doubled on itself to the bottom of the cavity, and the ends left out for drainage. Over this a thick layer of marine lint and a bandage were applied.

No trouble of any kind followed the operation—no hemorrhage, inflammation, or suppuration. Contraction and healing went on rapidly, with as little disturbance as possible by repetition of dressings, they being changed only when soiled. The cavity was syringed at each change of dressing with a solution of permanganate of potash in chlorinated soda (3j potass. permang. dissolved in liq. sodæ chlor. 3iv, and 3ss of this diluted with water Oss at time of using), and oakum soaked in the same was substituted for the marine lint. This was kept up until the cavity and wound closed, which was in about a month. The man is now (October, 1883) quite well, and is at work. No thickening, induration, or enlargement marks the site of the formidable aneurism, and there is only a tender cicatrix where it was laid open to remind him of the danger he has passed.

The points of interest in this case are, 1st, the obscurity of the signs of aneurism, accounted for by its becoming diffused, and consequently having no sac, the large quantity of blood suddenly extravasated and coagulating acting as a buffer to prevent pulsation, and having no cavity to receive an expansive impulse. 2d, the same cause, viz., diffusion, preventing any benefit from compression. 3d, the absence of hemorrhage upon removal of all the coagulated blood and hardened fibrin filling up the hollow of the ham. 4th, the antiseptic treatment pursued kept the large cavity left from suppurating, and the system free from all disturbance, and conduced to progressive and painless healing; and, 5th and lastly, the great gain of time in restoring the limb to its full usefulness by the removal of the tumor, which was too large ever to have been absorbed, and would have continued to produce lameness by its presence.

MEDICAL PROGRESS.

PORRO OPERATIONS.—DR. BONI recently performed this operation at the St. Nicholas Hospital at Arezzo, for grave rachitic deformity, profuse hemorrhage coming on from rupture of the membranes and threatening life. The patient was in excellent condition on the seventeenth day after the operation.

PROF. ANTONIO MARTINO has also performed the operation quite recently, at the Maternity Hospital in Naples, for rachitic deformity. Both mother and child were saved.—*L'Indipendente*, Oct. 15, 1883.

REPORT OF THE GERMAN CHOLERA COMMISSION.—DR. ROBERT KOCH, Chief of the German Scientific Commission, has presented a preliminary report, dated Alexandria, September 17, 1883 (*Deutsche med. Wochenschr.*, October 17, and *Med. Times and Gazette*, October 20, 1883), in which he says:

"As the cholera epidemic was already rapidly subsiding when the Commission arrived in Egypt, it was hardly to be anticipated that that country would supply the material necessary to complete the investigation. And, moreover, as the period when an epidemic is on the wane is hardly the best suited for inquiry into its etiology, the original plan was changed, and it was decided to make only the preliminary researches in Egypt, with the view, in case the epidemic should extend to Syria, of rectifying them in places which had been but recently attacked by the cholera, and which would therefore be likely to afford a favorable basis for the inquiry.

"The first portion of this plan has hitherto been carried out with very satisfactory results, for, during its stay in Alexandria, the Commission has found opportunity to collect the material necessary for preliminary inquiry.

"The material so far used for the research has been obtained from twelve cholera patients, and from ten cadavers dead of the disease. Of the patients, nine were under observation in the Greek Hospital, two in the German, and one in the Arabian. In all cases the symptoms corresponded in every particular with those of true Asiatic cholera. Portions of the blood, of the vomit, and of the dejections of these patients were examined. As it very soon became evident that the blood was free from micro-organisms, and the vomited matters contained comparatively few, while in the dejections they were found in considerable numbers, the last-named were chiefly used in the inoculation experiments on animals.

"Although the quantity of post-mortem examinations was not large, we were happily favored in obtaining from them extremely valuable material for the preliminary inquiry. The autopsy was made in most cases immediately after death, or at the outside only a few hours later. The changes which putrefaction produces in the organs, and with especial rapidity in the bowel, and which render microscopical examination of these parts most extremely difficult, could under these circumstances be excluded with certainty. I would lay especial stress upon this fact, because in other countries it would be scarcely possible to obtain material so well adapted for microscopical examination. The pathological appearances, like the symptoms during life, left no doubt that we had to deal with true cholera, and not, as was maintained in several quarters, with a so-called choleric form or choleroïd disease.

"No organized infective material could be demonstrated in the blood, or in those organs which, in the case of other infective diseases, are usually the seat of micro-parasites, viz., the lungs, spleen, kidneys, and liver. In some cases bacteria were found in the lungs, but these, as we saw from their peculiarities of form and position, had nothing to do with the peculiar disease-process, but had found their way into the lungs by the inspiration of ejecta from the stomach.

"The contents of the bowel and the dejections of the cholera patients contained extraordinary quantities of micro-organisms belonging to the most different varieties, none of which appeared in preponderating proportion. There was also an absence of other indications of a relationship to the disease-process.

"The bowel itself, on the contrary, gave most important results. In all the cases except one, which had died of a consecutive disease several weeks after recovery from cholera, bacteria of a definite form were

found in the coats of the bowel. These bacteria are rod-shaped, and belong therefore to the bacilli; in size and shape they most nearly resemble the bacilli found in glanders. In those cases in which the bowel showed the slightest changes to the naked eye, the bacilli were found to have penetrated into the follicular glands of the mucous membrane, and had there given rise to very considerable irritation, as shown by the increase in the lumen of the gland, and the collection of many nucleated round cells in its interior. In many cases the bacilli had also penetrated behind the epithelium of the glands, and had proliferated between it and the basement membrane of the gland. They had, moreover, collected in considerable quantities on the surface of the villi, and had often penetrated into their substance. In the severe cases, which had been characterized by hemorrhagic infiltration of the intestinal mucous membrane, the bacilli were found in large numbers, and were not limited only to the interior of the follicular glands, but had passed into the surrounding tissues, into the deeper layers of the mucous membrane, and here and there even into the muscular coat of the bowel. The villi were also in such cases extensively invaded by the bacilli. The chief seat of these changes is the lower portion of the small intestine. Had not this investigation been made on quite recent cadavers, the result would have been of little or no value, for putrefaction is able to produce in the intestine exactly similar bacterial growths. A year ago I had found these same bacilli, with a similar distribution, in a choleraic bowel which I received direct from India; but I had not been able to attach any value to it on account of this very reason, for it was always possible that they might be confounded with post-mortem putrefactive changes. Now, however, that any error arising from putrefactive phenomena can be positively excluded, this earlier discovery, made in four different Indian cholera cases, acquires extraordinary value. Nor is it an unimportant fact that the agreement in the appearances of the bowel in Indian and Egyptian cholera furnishes a further proof of the identity of the two diseases.

"The number of cadavers examined is certainly small; but, as the bacilli were met with in all recent cases of cholera, while they were absent in the single case examined after the cessation of the cholera process, as well as in several other cases dead from other forms of disease, and examined with special regard to this point, there can be no doubt that they stand in some sort of relation to the cholera process. It cannot, however, as yet be concluded that they are the cause of the cholera. The relationship may be quite the reverse; it being quite as possible that the cholera process produces such changes in the intestinal mucous membrane as to admit the penetration into its tissues of a definite bacillus variety of the many parasitic bacteria which are constantly met with in the bowels. Which of these two hypotheses is the correct one—whether the infective process or the bacterial invasion is the primary event—can only be decided by attempting to isolate the bacteria obtained from the diseased tissues, to cultivate them, and then to reproduce the disease by inoculation experiments on animals. For this purpose it is absolutely necessary to have at one's disposal animals which are susceptible to the infective material in question. Hitherto, however, in spite of every endeavor, we have not succeeded, in an indisputable manner, in conveying cholera to animals.

"The most varied attempts were made, and the animals fed with the vomit, with the cholera dejections, and with the contents of the bowel obtained post-mortem—given in some cases quite fresh, in others after it had stood for a time in a cold or a warm room, in others again dried—but in no case did choleraic symp-

toms appear; on the contrary, the animals continued perfectly well. Besides this, the bacilli found in the contents of the bowels and in the intestinal walls were cultivated, and animals were fed, and in some cases inoculated, with the product. In some cases septic manifestations followed inoculation, but in none was cholera reproduced.

"That the *materies morbi* in an active form is very often contained in the dejections of cholera patients is shown by numerous facts, especially by the frequent infection of washerwomen who have had to wash the soiled linen. A case of this kind occurred in the Greek Hospital during the present epidemic—a washerwoman, who was exclusively employed on the linen of cholera patients, having sickened of the disease.

"It may therefore be regarded as certain that of the many substances used in the experiments, some at least must have contained infective material; and the fact that no result was obtained may be attributed either to the animals used being completely insusceptible of cholera, or to the proper mode of infection having yet to be discovered. The experiments shall be continued, and modified in both directions, but there is little prospect of any result being obtained with the material at present at our disposal.

"For it is not very probable that the reason of the failure of the infection experiments is to be found in those circumstances only. There is still a third explanation, for the correctness of which there is much to be said. It is well known that, in any given place attacked by cholera, the disease subsides long before all the inhabitants have been affected by it; and although the morbid material may be concluded to be distributed widely over the whole neighborhood, yet fewer and fewer people fall ill, and the epidemic dies out while many individuals still remain capable of infection. This phenomenon is only to be accounted for on the hypothesis that towards the end of the epidemic the infective material declines in activity, or at least becomes uncertain in its action. If, then, when the epidemic is declining, even human beings cease to be susceptible to the infection, it is hardly to be expected that the contrary should be the case with the animals experimented on, concerning whose susceptibility to cholera we as yet know nothing. In our researches only such subjects were available as were to be collected towards the end of the epidemic, and their incapability of conveying the infection was to be expected with more or less certainty. It still remains possible that, under favorable circumstances—i. e., at the commencement of an epidemic—one might succeed in infecting animals, and by that means one would at once discover whether the bacilli which I have shown to exist in the intestinal mucous membrane are the true cause of cholera.

"Though, therefore, the results so far obtained by the Commission are still far from completely solving the problem, and though they have little practical value in the struggle against cholera, yet, considering the unfavorable circumstances, and the short duration of the investigation, they may be considered as very satisfactory. They completely answer the original aim of the inquiry, and, indeed, exceed it, inasmuch as the constant discovery of characteristic micro-organisms satisfies the first condition which must be fulfilled in the investigation of an infectious disease, and thus secure a definite goal for further research."

THE USE OF STRYCHNIA IN LABOR.—DR. EMILE DEGHILAGE recently used sulphate of strychnia in a case of uterine inertia in which all the usual remedies, friction, irritation of the cervix, injections, ergot, baths, etc., had failed, twenty-five minutes being sufficient to complete the labor, without any untoward circum-

stances. The pains of labor seemed to be diminished. The motor action of the drug on the muscular tissue of the uterus was very evident. The method of using it is very simple. Every ten minutes a granule containing gr. $\frac{1}{10}$ of sulphate of strychnia is given. As the head descends, the interval between the doses is increased. It should not be given until the cervix is dilated. It would seem that this medication is especially indicated in cases of uterine inertia, and the author claims that it is preferable to forceps-delivery in these cases, as not being liable to be followed by hemorrhage. Deghilage has had several cases in which the results were as satisfactory as in the case reported. —*Journ. de Med. de Paris*, October 13, 1883.

ETIOLOGY OF PUERPERAL INVERSION OF THE UTERUS.—In a paper by FÜRST in the *Archiv für Gynäkologie*, Bd. xx. Hft. 3, the author describes the following as the conditions which predispose to the occurrence of inversion of the uterus in the puerperal state: 1. Feebleness of uterine action as a result of prolonged labor, cases in which delivery is often completed by the forceps. Out of one hundred and forty-eight cases collected by Lee, in twenty the labor was exceptionally slow, and in twenty-five very quick. 2. Attachment of the placenta to the fundus uteri. Considering the large part which want of tone in the uterine muscular fibre plays in producing, or rather in permitting, inversion of the organ, and having regard to the exceptional presence of this atony in primiparæ, Dr. Fürst is of opinion that the accident occurs more frequently in first labors than would be expected—a fact which he attributes to the greater frequency of fundal implantation of the placenta in these cases, as shown by the comparative rarity of placenta prævia in primiparæ. 3. Comparative rigidity of the vagina, opposing descent of the uterus in response to downward pressure on it, and thus favoring the production of inversion by a force acting on the fundus, this being a condition also met with chiefly in primiparæ. According to Schatz, the opposite state, laxity of the vagina, is one of the conditions which bring about inversion. 4. Narrowness of the vulva, preventing the easy exit of blood, so leading to distention of the uterus, in the sudden emptying of which inversion is likely to occur. Adhesion of the placenta is known to be frequently associated with inversion. Thus, out of Lee's one hundred and forty-eight cases, in sixty-seven the placenta was attached to the inverted organ, its manual removal being required in fifty-three of them. —*Medical Times and Gazette*, October 20, 1883.

ALTERATIONS OF THE VENA CAVA COMPLICATING CIRRHOSIS OF THE LIVER.—In cirrhosis of the liver, says DR. GIOVANNI, ascites appears before œdema or anasarca; in diseases of the heart the reverse is true, as a rule. There are, however, many exceptions in cases of cirrhosis. Œdema may appear in the lower extremities and in the whole lower half of the body, before the mechanical conditions producing intra-abdominal pressure are produced. It may appear in the first period of the affection, when its course is subacute, and marked abdominal symptoms are presented, as hepatic and intestinal pain, dyspepsia, vomiting, albuminuria, etc. Œdema may also be slow in making its appearance in cirrhosis whether before the symptoms of the hepatic affection are well defined or when it has already arrived at an advanced stage.

The intra-abdominal pressure may, on the one hand, be very considerable without there being a trace of anasarca, and, on the other hand, the œdema may be very strongly marked with a very small or even no abdominal pressure. The intra-abdominal pressure may be regarded then as the principal cause of the

anasarca. It seems that the vena cava inferior in its passage between the lobes of the liver, ought necessarily to be a little obstructed during the period of shrinking of the organ, but this cannot be held as an explanation of the œdema which appears in the first periods of the affection.

According to Dr. Giovanni, the principal cause of this œdema is a special lesion of the inferior vena cava which, in these cases, is always found in a very marked state of hydræmia and dilatation, with well-defined lesions of peri- and endo-phlebitis, and with considerable thickening of the vein walls. When, on the contrary, no œdema appears during life, the vena cava is found in a perfectly normal state.—*Journal de Méd. de Paris*, October 13, 1883.

ARTERIAL LESIONS IN VARICOSE ULCERS.—The difficulty of interpreting the relations of associated changes constitutes one of the most beneficial exercises for the development of a logical state of mind. Cornil and Ranvier have observed endarteritis frequently in the tissues of wounds, ulcers, and inflammations of the connective tissue. Some new investigations on varicose ulcers by MM. ARNOZAN and BOURSIER have revealed a remarkable degree of change in the arteries of the parts bounding the ulcer. In the smallest vessels an increase in thickness of the muscular coat has been measured. In the larger arteries areas of endarteritis were discovered together with hypertrophy of the muscular coat. What is the sequence of events in such a varicose ulcer? Is the ulceration dependent on the arterial disease, or are the vascular changes secondary in point of time to the ulceration? Are all the changes the result of increased venous congestion, or is there some other cause at the root of the whole of the alterations?—*Lancet*, October 20, 1883.

CATHETER FEVER.—In inaugurating the autumnal session of the Clinical Society of London, the President, SIR ANDREW CLARK asked from the surgical members of the Society information on one subject. In 1870 a man, who was otherwise in good health, consulted him for slight incontinence of urine. He consulted a specialist, who found his prostate enlarged and his bladder unable to empty itself, and advised him to use a catheter. Four days later he was taken ill; urine contained a little pus; pulse 120; temperature 100°. After two days the temperature rose higher, the pulse became more frequent, and in eight or nine days he died; the bladder was inflamed, and the kidneys were reported to be healthy. Since 1870 he had seen four or five such cases every year. He had not been able to gather sufficient information on this malady, which was not very uncommon. He was not alluding, of course, to the slight rigors after catheterism, but to a fever which generally ended fatally. The catheter had sometimes been tied in, and at others only passed occasionally.

The first thing that suggests itself, *The Lancet* (October 20, 1883) says, in considering these cases is the fact that they are not met with as a sequel to catheterism in men who have been previously free from disease of the urinary organs. The history always is that there has been long-standing stricture, or enlargement of the prostate, with atony of the bladder and chronic retention of urine, or calculus in the bladder; and that then, on some slight irritation of the urethra or bladder, such as is caused by the passage of a catheter, this serious chain of symptoms ensues. This undoubtedly throws great light on the pathology of the cases. The condition which is common to these various evils is a chronic interstitial inflammation of the kidney, especially of the cortex. The kidneys thus diseased may be little

altered in their general appearance, but the capsule is a little less readily stripped off than usual, and leaves the surface of the organ irregular, and the cortex itself is abnormally pale. With the microscope, however, the change is at once to be detected in a cellular and fibrous intertubular infiltration and a granular condition of the epithelium. There may or there may not be superadded to this absorption of the pyramids the result of the pressure of urine dammed back in the pelvis of the kidney. When the cortex of the kidney is in this condition, a slight irritant is sometimes sufficient to light up an acute and fatal inflammation. This irritant may act directly upon the organ, as when the urine in the pelvis undergoes putrefaction; or indirectly in a reflex manner, as in the passage of a catheter or other instrument along the urethra, or in the performance of any operation upon the urinary tract. This acute interstitial nephritis tends to run on to suppuration, and causes lines and spots of pus or larger abscesses to be scattered through the cortex; the organ is at the same time swollen and greatly congested. The symptoms to which this acute affection gives rise are fever, usually attended with one or more rigors, nausea, often vomiting, dry brown tongue, loss of appetite, drowsiness, absence of spontaneous pain, though in some cases there are tenderness in one or other loin, failure in the pulse, and then, later on, cold clammy skin, deepening stupor, perhaps diarrhœa, coma, and death. Convulsions are very rare; œdema is absent; and as the urine is secreted in moderate quantity up to the end of life, the symptoms do not present a likeness to those familiar to physicians in Bright's disease. In the chronic form of the disease the urine is secreted in considerable quantity, is of low specific gravity, and only rarely contains a very small trace of albumen, and an occasional hyaline cast may be detected in it. In the acute form the urine is generally less abundant and more albuminous. But as there is often an added catarrh of the bladder, it is impossible to determine accurately the state of the urine as secreted by the kidneys. We would suggest, then, that the cases referred to by the President of the Clinical Society are those of chronic interstitial nephritis set up by chronic disease of the bladder, prostate, or urethra, in which an acute renal inflammation is induced by the passage of a catheter. The subject is a very important one, and now that attention has been called to it in so prominent a way, it is probable that the true nature of these cases will be more generally recognized.

SOLUTION OF BROMIDE OF ARSENIC IN DIABETES.—DR. PEKAI, Clinical Assistant to Prof. Karanyi, of Buda-Pesth, has recently made a series of researches as to the value of bromide of arsenic in the treatment of diabetes. He was led to these experiments by the publication of several cases cured by Dr. Clément, of Frankfort-on-Main, in 1882. Dr. Pekai's results have been very satisfactory.

A young man, so feeble that he could scarcely go upstairs, was, after three months' treatment, enlisted as a soldier. Between February 15th and May 7th, his weight increased from one hundred and twenty to one hundred and forty pounds. The sugar which, on the first day, amounted to five per cent., had disappeared. The medicine was then discontinued, and the patient placed on gluten bread. At the beginning of the treatment gtt. iij of the medicine were placed in 3j of water, and this taken in three doses. The quantity was increased by the addition of one drop every three days until gtt. x were taken daily. Before commencing this treatment the patient was placed on an exclusively animal diet, and the sugar diminished, but at the end of seventeen days there was still a large quantity of sugar. The medicine was then ordered, the flesh diet

being kept up, and in eleven days the sugar had almost completely disappeared. In another case, the result, though not so brilliant, was very satisfactory. The solution is prepared as follows: grs. iss āā of arsenious acid and carbonate of potash are placed in a brine measurer (éprouvette); gtt. v of water are added, and treated until the liquid is limpid. Then add sufficient water to make ten grammes (3iiss by weight). Add then grs. iss of bromine and leave for twenty-four hours.—*Journ. de Méd. de Paris*, October 13, 1883.

LARGE CYSTIN CALCULUS—REMOVAL BY THE HYPGASTRIC OPERATION.—MR. JOHN TREMEARNE presented a record of this case to the Medical Society of Victoria on July 4th.

This calculus, measuring $2\frac{1}{2}$ inches long, $1\frac{1}{4}$ inches broad, and 1 inch thick, with a circumference of over 7 inches, and a weight of $2\frac{1}{2}$ oz. 54 grs., or 1254 grains, is composed of pure cystin, a form of stone not only rare, but, I believe, the largest of its kind that has ever been taken out of the bladder by operation. It was removed from a very tall, thin man, aged 47, who had been troubled for several years with dyspnoea and pleurodynia (?), as well as occasional sudden stoppage of urine whilst in the act of passing it, and on some occasions very small gravel had come away, resembling the calculus in color. Eighteen months previously he fractured his leg, and whilst lying on his back had no trouble whatever with the water. On rising from bed after the union of the bones he found great difficulty in micturition, and very soon the dyspnoea developed into severe spasmodic asthma. The water trouble increased, so that in November, 1882, he could not retain his urine beyond an hour, rarely that, and suffered much pain in the perineum and end of the penis. Every time previous to passing his urine he had half an hour of fearful forcing pain, and was obliged to rest on his knees and elbows until the bladder was emptied.

On November 27th, chloroform was administered, and an examination made. Directly the sound entered the bladder it struck a stone. A finger was introduced into the rectum, and the stone pushed forwards, so that it could be distinctly felt by pressing the fingers of the other hand on the abdomen just above the pubes. On introducing a lithotrite, instead of the sound, the size of the calculus was pretty accurately determined.

Three days afterward he was again put under chloroform, when the stone was successfully extracted by the supra-pubic or high operation. A tube was then put through the wound into the bladder, and fastened by tapes with long pieces of strapping around the abdomen. The tube was a large one, so that the bladder contracted around it and prevented extravasation. At the end of a week it was removed, and on the twelfth day urine commenced to pass through the urethra.

Within five weeks of the operation he gained thirty pounds in weight, and had apparently completely recovered his health.

In this case the large size of the tube introduced into the wound is particularly to be noticed. In the lateral operation I always adopt the same method (the vaginal pipe used with Higginson's enema apparatus answering the purpose very well), and leave the tube in the bladder usually four or five days.

In addition to preventing extravasation, it is a great help in checking secondary hemorrhage, should anything of the kind occur, and renders washing out the bladder easy.

DR. ALLEN said that the largest cystin calculus noted by Coulson was in the University College Museum, and weighed 850 grains; another at Bartholomew's weighed 740 grains. Heath once exhibited nineteen taken from a single patient. Cystin calculi are formed originally

in the kidney, the nucleus being sometimes uric acid, sometimes pure cystin. Their color on removal was usually honey yellow, becoming greenish on exposure; as a rule they were friable, and could be crushed without difficulty. With the present specimen the fingernail sufficed to make a white scratch; hence it would be interesting to know whether any attempt was made to crush it. Surely when the stone was once caught in the grasp of the lithotrite, a surgeon would be tempted to try the effect of a squeeze. Cystin is very rich in sulphur, being nearly related to the taurin of the bile. Such calculi often ran in families, and it would be well to learn if there was any hereditary predisposition in the present case.—*Austral. Med. Journ.*, July 15, 1883.

INFLAMMATION OF THE THYROID IN DIPHTHERIA.—DR. BRIEGER reports two cases of inflammation of the thyroid gland occurring in the course of diphtheritis. The first patient was a young woman æt. eighteen years, who had no fever when first seen on the seventeenth day. Two days afterward, and while the diphtheritic membrane was still present, quite a high fever came on, with pain and swelling of the thyroid gland, and aphonia and dyspnoea. Antipyretic treatment seemed to have no good effect, but a good deal of relief was obtained by poulticing the swelling. Twenty days later Brieger made an incision at the point of fluctuation, and about one ounce and a half of pus was evacuated. The patient recovered under careful treatment.

In the second case, of a woman æt. thirty-two, the inflammatory process was aborted by energetic antipyretic treatment, and by leeches in the early stage. The thyroid inflammation subsided in both cases before the diphtheritic process. Brieger thinks that there is no doubt that the thyroiditis was the direct consequence of the invasion of the gland by the diphtheritic microbes.—*Centralbl. f. klin. Med.*, June 23, 1883.

REMOVAL OF FOREIGN BODIES FROM THE STOMACH.—To the case of the *homme à la fourchette* and the extraction of a spoon from the stomach of another patient, described in the *Semaine Médicale*, October 5, 1882, DR. HAGENS, of Dantzic, adds a third, recently described by him in several German medical journals. The operation, however, is not recent, for this third case was performed by Daniel Schwaben, "lithotomist and surgeon," at Dantzic, in the early part of the seventeenth century. A countryman, in endeavoring to produce vomiting for the relief of colic, was tickling his palate with a penknife, when he suddenly let go of the handle of that instrument, which was accidentally swallowed forthwith. Six weeks later, Schwaben made a very free incision through the abdominal walls and the anterior part of the stomach, and extracted the knife. The patient recovered, and was able, for several years afterwards, to work hard in the fields, never suffering from any local symptoms. The original manuscript description of this remarkable case is in the hands of Dr. Hagens. The surgeons of Dantzic and Königsberg appear to be the most dauntless pioneers of the desperate departments of operative surgery; last December we had occasion to refer to an unsuccessful case of excision of a phthisical lung by a surgeon practising in the former city.—*British Medical Journal*, October 20, 1883.

INTERSTITIAL BACTERIAL NEPHRITIS IN CHILDREN.—DR. LUDWIG LETZERICH reports cases, seen during the spring and summer of this year, of a peculiar inflammation of the kidneys, epidemic and primary in children, and absolutely independent of any acute exanthem. The number of cases seen was twenty-four, the same symptoms being presented in all, and which showed the same fungi in the urine. Three children died of acute uræmia. The fungi found in the urine

were carried through four successive cultivations, and then inoculated on rabbits. The rabbits were killed after a short time, and the same fungi found on microscopical examination. The fungi were somewhat similar to the bacilli of typhus; they were somewhat broader and larger, however, and showed no globular forms. They had a disposition to become elongated, and form threadlike bodies, in which spores, developed and in irregular masses, were seen lying at various distances apart. During the spore formation, the threadlike bodies could be seen separating into rods of different sizes.

In the interstitial tissue of the kidneys were found very large deposits of micrococci. The kidneys were markedly hyperæmic, and the stellate points were of a dark-red color, with black diagonal lines running through them. There were numbers of wandering cells in the interstitial tissue.—*Allg. wiener medicin. Zeitung*, October 9, 1883.

MAZANITA.—Mazanita is a plant indigenous to California, and the leaves are the part of the bush used in the preparation of the fluid extract. This has an astringent and somewhat bitter taste. It is said to be an astringent tonic with a special action on the urinary organs, and has been recommended as a valuable agent in the treatment of gleet, vesical catarrh, incontinence of urine, etc.

DR. H. W. RAND reports fourteen cases, twelve being cases of gonorrhœa and two of gleet. In about one-half of the cases there was improvement on doses of grt. x-3iss three times a day. In other cases there was no perceptible improvement after a week's administration and the treatment was changed. The appetite seems to improve under the use of mazanita, and no gastric disturbances are produced. Although it is said to be astringent, it does not seem to cause constipation. Dr. Rand thinks that it is contraindicated in acute cystitis, and he would hesitate to use it in a case of irritable bladder. From his limited experience he thinks that it may be advantageously used during the stationary or decreasing stage of gonorrhœa, or in a long-standing gleet where the older and well-tried drugs had failed to relieve or had disturbed the stomach.—*Proc. of Med. Soc. of Kings Co.*, Nov. 1883.

GARTNER'S DUCTS IN WOMEN.—In a paper published in a recent number of the *Archiv für Gynäkologie*, Dr. J. KOCKS, of Bonn, describes certain fine canals which he has been able to find in about eighty per cent. of those women in whom he has searched for them, and which he believes to be the remains of Gartner's ducts. These canals open close to the posterior margin of the meatus urinarius, and a probe of one millimetre (about one twenty-fifth of an inch) in thickness can be passed into them for a distance of from half a centimetre to two centimetres (about one-fifth to four-fifths of an inch). Their orifices are often situated a little distance behind the urethral orifice, so that the canal has to be held open in order to see them; but generally, says Kocks, the openings are to be found at the summit of the little lips of mucous membrane which bound the posterior part of the meatus to right and left. They are generally both present, but one may be absent. Dr. Kocks compares their appearance to that of the lachrymal puncta. They run in the urethro-vaginal septum, and end blindly. They are found most easily in young adults. In the newly born they are relatively larger, but absolutely smaller than in adults. In old women they become obliterated or lessened in size. Dr. Kocks regards them as the homologues of the ejaculatory ducts in the male. In the following number of the same journal, Professor C. Böhm, of Vienna, writes to say that he, like Kocks, has been able to de-

monstrate the presence of these ducts; and, further, that he has seen cases of acute and chronic inflammation of them. Sometimes this inflammation is but part of a similar process affecting the vagina, vulva, and urethra, but sometimes it exists by itself. In the latter case, owing to the presence of redness and swelling of the meatus, discharge of pus from it, and pain on making water, the disease may be taken for gonorrhœa. From this it is to be diagnosed by evertting the margins of the meatus, and noticing that the pus issues from the ducts in question. It is to be cured by applications of solid nitrate of silver to the inflamed ducts. Unless proper diagnosis is made, and this treatment employed, the disease may prove obstinate.—*Medical Times and Gazette*, October 20, 1883.

THERAPY OF BASEDOW'S DISEASE.—From his personal experience in the treatment of seventy cases, and from the united and concordant observations of Von Dusch, Eulenberg, Meyer, Erb, and others, CHVOSTEK regards the rational employment of galvanism as the most important item in the therapeutics of ophthalmic goitre.

As the best methods of administering the electricity in these cases he recommends the following: 1. The ascending constant current should be applied to the cervical sympathetic on either side, for one minute at most. 2. The ascending constant current should be applied to the spinal cord—the anode being placed about the fifth dorsal vertebra, and the cathode high up in the cervical region. 3. A constant current should be applied, at the longest for one minute, through the occiput, one pole being placed on each mastoid process, and in some cases also through the temples; the current should be so weak that the patient only feels the slightest sensation of burning. In some cases, also, local galvanization of the thyroid, for about four minutes, with a weak constant current, which is reversed at the end of each minute. If possible, the applications should be made every day. Chvostek obtained very good results, as a rule, a cure or marked improvement resulting even in the worst cases. Three patients died of anæmia or other complications.—*Central. f. klin. Med.*, June 23, 1883.

UNUSUAL MALFORMATION OF HEART.—At the meeting of the Pathological Society of London, on October 16th, DR. HOWARD TOOTH showed the heart of a boy, æt. 6 years, who had been a patient of Dr. Gee's at St. Bartholomew's Hospital. The signs were marked cyanosis, especially of the lips and tongue, clubbing of the fingers and toes. There was bulging in the præcordial area, and a loud systolic murmur all over, but loudest at the apex. The child was admitted for enteric fever, and died from peritonitis. On autopsy, the characteristic lesions of enteric fever were found in the intestines. The heart weighed eight ounces and a half. The foramen ovale was not quite closed. The right ventricle was dilated, and the aorta arose from it, and went over to the root of the left lung as usual. The septum between the ventricles was deficient at the base, and the space thus formed was divided into two holes by the columnæ carneæ. The endocardium was thickened at the edge of this hole. The pulmonary artery, which was of fair size, and guarded by only two sigmoid cusps, also arose from the right ventricle. The ductus arteriosus was closed. The left auricle was smaller than the right. The left ventricle was small and had no vessel arising from it, and must therefore have propelled the blood contained in it into the right ventricle. He believed that this was a decidedly rare form of malformation of the heart. The existence of endocarditis was a further evidence of the well-known tendency to it in these cases.—*Med. Times and Gaz.*, October 20, 1883.

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AIR IN THE VEINS AS A CAUSE OF SUDDEN DEATH IN PUERPERAL WOMEN.

SUDDEN death of women soon after labor, while not a frequent event, is one so startling that inquiries into its cause, or causes, are of great importance. It may be that in some cases the event is unexplained, while in others, possibly, a wrong explanation is sometimes given.

Maurice Coste, in a monograph published in 1876, regards myocarditis as the most frequent cause of sudden death in the puerperal state. The late Dr. Charles D. Meigs attributed it to heart-clot, his first publication upon the subject being made in 1849 in the *Medical Examiner*; and he was not anticipated, as stated by Playfair in his *Midwifery*, by Paget.

The cases which Dr. Meigs has given in illustration of his views in his well-known and invaluable *Treatise*, are instances of rapid, rather than of sudden, death. None of them occurred immediately after labor; in some the interval between delivery and death was several days. Admitting pulmonary thrombosis, or heart-clot, as the cause of death occurring some days after labor, and occurring usually *rapidly*, rather than *suddenly*, is this the probable cause of death just after, or a few hours after, delivery? The *Medical Record* last year reported three cases of death of women after delivery, two within two hours, and one whose labor ended in the evening and who died the next morning; two of the deaths are attributed to pulmonary, and the other to cardiac embolism; in each the verification of an autopsy was not obtained.

The entrance of air into the uterine veins is

probably, in some cases, the cause of sudden death occurring soon after delivery. In January of this year, Dr. Draper reported in *The Boston Medical and Surgical Journal*, two cases where instant death occurred from efforts to cause criminal abortion; post-mortem examination proved in each case the presence of air in the veins.

In a recent number of the *Wiener medizinische Wochenschrift*, Braun gives three fatal cases from the introduction of air into the uterine veins; in two of these cases the uterine douche was used, in one to produce abortion, in the other after delivery of twins, and the patients died in a very short time, one indeed within twenty minutes; post-mortem examination showed air in the uterine veins, in the ascending vena cava, and in the veins of the heart.

The third case was that of a woman who had been delivered lying upon her left side, and was then turned upon her back; massage was made upon the uterus, she gasped, and died in a few minutes. Braun suggests that in the change of position a volume of air entered the uterus, and the manipulation, instead of driving it outside, forced it into the uterine veins.

According to Dr. John Rose Cormack (*Prize Thesis*, Edinburgh, 1837), Brown Langrish was the first to prove that air injected into the jugular vein of a dog caused almost instant death; this was in a communication made to the Royal Society of London about 1746. Since that time many similar experiments have been made, not the least important of which were those of Magendie, which showed that it was not so much the quantity as the rapidity with which the air was introduced that brought immediate danger.

The first instance where air entering a vein during a surgical operation was the cause of sudden death occurred in 1818, at the Hôpital Saint-Antoine. Beauchene was extirpating a tumor from the right shoulder of a patient and a part of the clavicle was removed; as shown by the autopsy, a piece of the jugular vein, an inch in length, and comprising half its thickness, was cut away, when there was suddenly heard a *bruit* quite similar to that of air entering by a small opening the chest of a living animal. The patient uttered the pathetic words, *Mon sang tombe dans mon cœur, je suis mort*; he became pale, his head thrown back, eyes fixed, vision lost, pulse small, frequent, irregular, the body covered with a cold sweat, some convulsive movements, and in fifteen minutes was dead. Since that time similar cases of death have been observed both in Europe and in this country. In surgery there has come to be recognized what is called a dangerous zone, within which thoracic aspiration may cause the entrance of air into a wounded vein. Marey observes, in *La Circulation du Sang*, that

this dangerous zone extends beyond the neck. Surgeons have met with cases of the entrance of air into the veins from a wound of the axillary, and even of the facial, near the angle of the jaw. In a foot-note Marey further states that thoracic aspiration may be exerted in the venous sinuses and in the canals of the cranial bones, and that Bernard has often spoken of the production of this accident in his vivisections, where the veins of the spine were opened. It is obvious that the dangerous zone is much larger than commonly thought, the bearing of this fact in explaining the spontaneous entrance of air into the uterine veins is also plain. In 1829, Legallois saw three cases of sudden death occur from the introduction of air into the uterine veins in animals upon whom he was studying the effect of abstinence and bleeding upon pregnancy.

Since these observations many obstetric authorities have held that the spontaneous entrance of air into the uterine veins may be the cause of sudden death in a woman after labor. Nevertheless, it is by no means a settled question. Hervieux, for example, in his *Traité Clinique et Pratique des Maladies Puerperales*, concludes his chapter upon the presence of gas in the heart and large vessels of lying-in women as follows:

1. The indisputable reality of cases of sudden death caused by the presence of gas in the circulatory system of lying-in women.
2. The impossibility of attributing the presence of these gases to a cadaveric effect, to a beginning putrefaction.
3. The identity chemically demonstrated of these with those of the blood, and the probability of their spontaneous development during life.
4. The necessity of carefully watching women who have had uterine hemorrhage, and although the introduction of air by the uterine veins is far from proved, it is the duty of the practitioner to resort to intra-uterine injections only with extreme reserve, strictly conforming to all the precepts of the art.

From what has been previously stated it does not seem improbable that thoracic aspiration may exert its force in drawing air into the uterine veins. It is to be remembered too that these veins in case of uterine relaxation after labor are in a condition, as to patency, similar to that of some other veins, which, when opened, admitted air with fatal result; they are so fastened to the muscular walls of the womb, through whose interspaces and meshes they pass, that without the firm contraction of those walls they cannot close, but are kept distended. Then, too, their great size at the end of pregnancy, is another condition to be borne in mind. Burton in his *New System of Midwifery*, published in 1751, observes that the uterine sinuses "in the ninth month of

gestation are so large as to admit the end of the biggest finger, and their orifices that open into the cavity of the womb will, at the same time, admit the end of the little finger." And the late Dr. McClintock has stated that if the uterus be examined soon after delivery at the full term the majority of the orifices of the uterine veins at the site of the placenta will readily admit a goose-quill, and some will allow the little finger to penetrate them without laceration.

Various explanations have been given as to how air in the veins causes death. Marey accepts that of Mercier, published in 1839, which attributes the death to this, that the blood mixed with air becomes frothy, enters the pulmonary capillaries, and obstructs them. Physicists know that a capillary tube which readily permits the passage of air, or of water, offers a great resistance to a mixture of air and water; this mixture causes a series of bubbles separated by minute diaphragms of liquid. Poiseuille has shown, by a series of experiments, that such in fact is the cause of death when air mixed with blood has obliterated the capillaries of the lungs, the right heart remains gorged and cannot be emptied.

A recent number of the *Gazette Médicale de Nantes* contains an interesting paper upon this as a cause of sudden death in puerperal women. Its author, DR. ALFRED ROUXEAU, after a theoretical consideration of the question, from which he concludes that spontaneous penetration of air in the uterine sinuses may occur, next directs his attention to the clinical aspect of the subject. He states that many alleged cases had nothing in their symptoms or in autopsies justifying the diagnosis. In addition to these, there are some others reported so incompletely in an anatomico-pathological point of view that they do not carry complete conviction. But there are others finally which seem conclusive, such as those of Draper. He also refers to the case of Davidson, reported in *The Lancet*, June 9 of this year. In this case the patient had a perfectly natural labor, and there was no post-partum hemorrhage. Three-quarters of an hour after the labor she was taking some nourishment, when she suddenly fell back and died. At the post-mortem examination, two hours after death, the uterus was found empty, with large and somewhat distended veins; the right side of the heart contained a quantity of air, mixed and churned up with blood, which escaped in bubbles; the lungs were congested; all the other organs were healthy.

Dr. Rouxneau gives the following as the usual characteristics of the accident: Soon after delivery the patient is suddenly seized, often without appreciable cause, with anxiety, and trembling; she groans, or utters a cry of fright; becomes livid, and

there is entire loss of consciousness; respiration, at first hurried and spasmodic, soon ceases; the pulse, small, rapid, in turn fails, a convulsion occurs, and the patient is dead.

As the symptoms are those of pulmonary embolism, too, the diagnosis, according to both Draper and Rouxeau, is determined by the time when the accidents occur. Embolism is a late accident, occurring usually during the second or third week, but not so the entrance of air into the uterine veins.

As to curative treatment, one can hardly do as Magendie did in the case of animals into whose veins he had injected air; withdraw it by means of a syringe, or as now would be done with an aspirator. Rouxeau observes that the treatment must be purely preventive; that is to say, one ought to hasten the retraction of the uterus after labor by hypogastric compression, ergot subcutaneously, and other measures.

Let us add a word to this treatment. When a patient is delivered of her child, while she is lying upon her side—and wherever rupture of the perineum is feared, such position is certainly the best one—let her be turned upon her back before the delivery of the placenta. A horizontal position should be strictly observed for at least several hours after labor. Intravaginal, and especially intra-uterine injections, if the latter should be considered necessary, must be made most carefully to prevent the possible entrance of air with the fluid used. Deep inspirations should be avoided, for, as pointed out by Marey, they increase thoracic aspiration. Finally, the practitioner should remember that the accident may occur where there has been no unusual flow of blood after the delivery of the placenta; hemorrhage was not its forerunner in some of the cases that have been reported.

PRELIMINARY REPORT OF THE GERMAN CHOLERA COMMISSION.

In another column will be found the full details of the preliminary report of Dr. Robert Koch, the Chief of the German Commission appointed to investigate the recent cholera outbreak in Egypt.

The Commission reached Alexandria after the disease had commenced to decline. Notwithstanding this, the blood, vomit, and dejecta of undoubted cholera cases were minutely studied. The blood was found free from micro-organisms, the vomited matters contained comparatively few, while they were quite numerous in the dejecta. These included the most different varieties, none of which seemed to preponderate or have any relationship to the disease-process.

Autopsies were made upon ten cadavers, either immediately after death or within a few hours, so that the post-mortem putrefactive changes which

take place so quickly in the bowel were avoided. No organized infective material could be found in the blood or in those organs in which, in other infective diseases, micro-parasites are commonly found, viz., the liver, spleen, and kidneys. In some cases, bacteria were found in the lungs, but it was evident that they had nothing to do with the peculiar disease-process, but had found their way there by the inspiration of ejecta from the stomach.

But in the bowel, results, deemed most important, were met with. In all cases, except one which died of a consecutive disease several weeks after recovery from the cholera, bacteria of a definite form were found in the coats of the intestine—in the follicular glands, in which they had given rise to considerable irritation, behind the epithelium of the glands, between which and the basement membrane they had proliferated, and on the surface of the villi, and in its substance. In severe cases, characterized by hemorrhagic infiltration of the mucous membrane, the bacilli invaded, in large numbers, the deeper layers of the mucous membrane, and even the muscular coat. The chief seat of the invasion was the lower portion of the small intestine.

The bacteria were rod-shaped, and were, therefore, bacilli. They resembled in size and shape most nearly the bacilli of glands. What is most interesting and important is that Koch had found these same bacilli, with a similar distribution, in a choleraic bowel which he had received directly from India. He had not, however, been able to attach any value to this discovery, because he had not been able to exclude the possibility of putrefactive changes. These were, however, excluded in the Egyptian cases, in which the autopsies were made promptly after death. Control investigations were made, and the intestines of persons dying of other causes were found not to contain the bacilli described.

In the crucial test concerning the specific nature of these bacilli, the Commissioners failed. They were unable, after repeated trial, to produce the disease in lower animals, including mice, dogs, monkeys, and chickens, by feeding the dejecta and vomited matters, or by inoculating the bacilli. In view of the acknowledged fact that the *materies morbi* of cholera lies in the dejecta, Koch attributes the failure to one of three circumstances—the insusceptibility of the animals experimented upon to cholera, or to the fact that the proper mode of infection has not yet been discovered, or that at the end of the epidemic the infection materially declines in activity, or at least becomes uncertain in its action. He expressly states that we dare not, as yet, look upon these bacteria as the cause of cholera. On the other hand, they may be its consequences.

It may be admitted that the Commission in discovering a definite kind of bacillus in the intestines in cholera, has advanced us a step onward in our knowledge of the disease. It is gratifying to know that the request of the Commission, that they may be allowed to continue their investigations in India, has been granted, because the experience already gained, together with the skill in manipulation which Dr. Koch has acquired, gives us a combination of qualifications which may reasonably be expected to accomplish important results.

In the same report, Dr. Koch says he has examined, post-mortem, two cases of dysentery dying in Alexandria, and has found in the diseased bowel a peculiar parasite which does not belong to the group bacteria, and has not been heretofore described. He also examined an Arab who had died of malignant pustule of the intestine, probably contracted from Syrian sheep, of which large numbers are imported into Egypt. He also made autopsies upon three typical cases of bilious fever, and proposed to study this thoroughly. Examinations of the air and drinking water of Alexandria had also been made.

THE ORIGIN OF YELLOW FEVER AT PENSACOLA.

THE report of the Naval Court of Inquiry upon the recent outbreak of yellow fever at the U. S. Navy Yard at Pensacola, which is given in full on another page of this journal, is a fresh illustration of the difficulties which are often met in attempts to trace the first steps of this disease in a community. The first cases are mistaken for something else, as appears to have been the case in this instance, and the investigation is undertaken too late to obtain positive and satisfactory evidence.

It will be observed that the Court indicates four possible sources of infection, but applies the term "probable" to only one of these, viz., the ballast derived from infected vessels during the two preceding years. The preservation of the specific cause of yellow fever in ballast, which has been exposed to the weather for several months through a winter season, would not seem to be a probable occurrence, in view of what are commonly supposed to be the effects of cold and of fresh air upon this cause. Nevertheless, there have been several outbreaks of yellow fever, both in ships and on shore, which have been attributed to infected ballast, chiefly because no other source could be considered possible, and although such an origin has never been proved in any case, it is a possibility that must always be considered.

That the specific cause of yellow fever may be preserved in connection with bedding, clothing, etc., if these are kept so that there is little change of air and not too low a temperature in their vicin-

ity, there is little reason to doubt. There are a number of well-authenticated instances in which the poison has thus been preserved, and even transported for long distances, and has then produced its effects after an interval of several months. How long it may be thus preserved we do not know, the longest period known to us being less than a year, but, if the disease is due to a specific organism which multiplies outside the living body, and this is at present the most probable hypothesis, there seems no improbability that it may survive under such circumstances for several years as well as for several months. The suggestion of the Court that the recent outbreak may have been due to fomites preserved in the equipment storehouse since 1867 or 1874, or in the marine barracks since 1875 seems, however, barely within the limits of possibility.

The possibility of the spontaneous origin of the disease does not seem to have been considered at all by the Court, nor is anything said as to the sanitary condition of the Yard, the presence or absence of contaminated soil, etc.

One thing seems evident from the report, and that is, that the outbreak cannot be charged to any defect in the quarantine system of the present year, and, therefore, that this system cannot afford protection against such occurrences. We do not mean to imply by this that quarantine against yellow fever is useless, but only that it is by no means an infallible preventive.

It seems to us that the most certain and least expensive method which the Government could adopt to prevent yellow fever in its military and naval stations on the Gulf coast, would be to retain in them during the summer months the smallest possible force consistent with the preservation and care of government property and stores, and to have this force composed entirely of persons who have had the disease, and are therefore insusceptible to it.

WILLIAM HARVEY.

It is impossible to convey to a layman the feeling with which a physician, who honors his craft, regards the great man whose remains have been lately rescued from further decay and placed in the chapel above the vault where they rested so long unnoticed and almost forgotten. Standing, as every doctor should who goes to London, before the admirable portrait, by Jansen, in the College Hall—something of Harvey's true presence returns for any imaginative person. The face is grave, but gentle too, with a not unkindly cynicism in the lines about the mouth. The head, well-moulded, rises above watchful eyes of hazel, the hair is gray and scanty, the features elegant and slight like the

form. It is not a face which disappoints you. It is not unworthy of the great thoughts which lay behind its shapely forehead, nor of the wise words which must have parted those lips. The hands crippled with gout can be seen in the picture; but they are finely formed and have the look of skilled use they ought to have had, to have been the artful servants of that marvellous brain to which God had given the power to unravel the mystery of the flow of blood through artery and vein.

It is pleasanter, somehow, to think of him as resting in the church where he was laid by the merchant brothers who were proud of his fame, and where he, no doubt, had often knelt, than in the crowded aisles of Westminster, to which at one time it was proposed to move him. The Harveys were new people in James the First's day; but getting money in trade built them a manor house in Essex, and laid their bones there, and in time carried thither the greater brother's remains.

To reach Hempstead, you drive from the quaint, old town of Saffron Walden, and climb a short hillside to a lonely little church, where the Harveys seem to possess all the monuments, and where the illustrious William is the single memory of any value.

He was, as some think, the greatest of all great physicians. We know what he did, and we can only grieve as we vainly guess how much more of what he did was lost forever when his house was sacked and his papers burned.

His manner of work was essentially modern and experimental. His speculations on his difficulties and results were humbly reverent, for he was of those who conceive that into the kingdom of knowledge, as into the Kingdom of Heaven, they who come with the submissive and ductile ways of childhood, will enter most easily.

One could wish that among those who bore the remains of Harvey to the new home which his medical brethren and heirs have provided, there had been some one out of the many who venerate his memory on this side of the ocean.

For surely with us this esteem for Harvey is deep and abiding, and we strongly feel that, as doctors, and as of English blood, we have a right beyond that of the German or the Frenchman to feel pride in the great thing he did, and to be thankful for the truth, the purity, and the manliness of him who did it. Strangely enough, his face, with its fine lines, is unlike the English visage of to-day, and is far more like some of the studious faces which haunt the elm shades of Harvard or Yale than those which are to be met among the monastic courts of his own Cambridge.

REVIEWS.

THE DISEASES OF THE PROSTATE, THEIR PATHOLOGY AND TREATMENT. By SIR HENRY THOMPSON. Fifth edition. 8vo. pp. 157. Philadelphia: P. Blakiston, Son & Co., 1883.

FRENCH and German writers and readers have long enjoyed the advantage of unbound books, enabling author and student to come together when they otherwise could not. Happily this plan of book-making has, like so many other excellent notions of Europe, made its way across the Atlantic; and in this country we have a certain number of medical publications put in such cheap form that any one may own them. The best that can be done in this direction has not been attained yet, but it will be in time.

The book before us is an illustration of what we have been saying. Of its literary and scientific merits it would be superfluous to speak; these are too well known to need praise. But it is a new departure to have them offered, in paper cover, for less than a dollar, to all who would like to have them at hand. We can understand the pleasure that the distinguished author has taken in seeing the cheap English edition offered to the public, with especial reference to the necessities and conditions of students, and we are glad to see here this same edition in a shape which, while cheap, is not mean. The form and illustrations of the more costly editions are preserved, and the paper cover is stiff enough to be quite serviceable.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 1, 1883.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D.,
IN THE CHAIR.

THE minutes of the last meeting were read by the Secretary, but before they were adopted DR. JOHN S. ADAMS read

A PROTEST

against the approval by the Academy of that portion of the minutes recording the adoption of the resolution of Dr. Loomis to rescind the resolutions of Dr. A. Flint, Jr., in regard to the admission of new members, which were adopted in April last, on the ground that the motion to rescind was clearly out of order, and should not have been permitted to come before the Academy. The reasons which he assigned for this opinion were the following:

That a question once put to a deliberative assembly could not again come up except through a motion for reconsideration, and, consequently, the motion to rescind was out of order.

That legislative bodies had the power to regulate their modes of procedure.

That Section 6 of the XXV. By-law of the Academy, referring to rules of order, read as follows: "After any question has been decided, except one of indefinite postponement, any two Fellows who voted in the majority may at the same or next stated meeting move for a reconsideration thereof; without which no discussion shall be allowed." At the same meeting at which Dr. Flint's resolutions were adopted, two Fellows who had voted with the majority in favor of them, moved their reconsideration, and the reconsideration being thus before the Academy, a motion was then passed that it should be postponed indefinitely.

That a motion to rescind was unparliamentary under

these circumstances, and that if the ruling of the chair was allowed to be established as a precedent, resolutions of every kind could be adopted and rescinded by the Academy in the most trivial manner, unworthy of its dignity. That a motion to rescind could in any case only have been in order after a motion had been made to reconsider by two Fellows, in accordance with the provisions of Rule of Order No. 6, and that no such motion had been made.

For these reasons, Dr. Adams said, he regarded Dr. Loomis's motion as an evident violation of the By-laws, and submitted that the action of the Academy in regard to it was consequently null and void. In conclusion, he requested that the protest should be entered in full on the minutes.

On motion of DR. LAURENCE JOHNSON, the protest was laid on the table; the Chair having stated before putting the motion, however, that, whether it was carried or not, the protest would be entered on the minutes in accordance with parliamentary usage. The minutes were then adopted.

Brief reports were made by the Corresponding Secretary, the Librarian, and the Committee on Admissions, and the latter recommended for resident membership the names of Drs. R. W. Taylor, C. H. Judson, R. W. Amidon, M. Josiah Roberts, and L. Emmet Holt, all of whom were elected Fellows during the evening.

THE CHAIR requested that some member would hand him the name of a gentleman competent, on account of his familiarity with the deceased, to prepare a memoir of

THE LATE DR. CHARLES WRIGHT,

an honored Fellow of the Academy. At the time of his death, Dr. Barker said, he was engaged in preparing a very important paper, which was to have been read before the Academy on the twentieth of December, on the subject of "The Duration of Life after the Appearance of Albumen and of Sugar in the Urine, after Repeated Examinations." This paper would no doubt have been of extreme practical value, on account of the immense experience of Dr. Wright in connection with one of the largest life insurance companies in this country; and he had shown that he had carefully considered the subject in all its bearings by the fact that he had prepared a preface to it on the danger of fallacy in drawing inferences from medical statistics. The latter he had read to Dr. Barker during the past spring, and the excellence of its composition had strikingly reminded him of the style of Dr. John Forbes.

In regard to the late DR. LENTE, he remarked that he also had been preparing a paper for the Academy, which was to have been read on the seventeenth of May last, but on account of the precarious condition of his health, he had asked to have the time postponed until the autumn. This had accordingly been done, and the date that had been assigned to him was this very evening, November 1st. The subject which he had selected was "The Duration of Life as Affected by Climatic Influences in Consumption," and it certainly seemed a curious coincidence that two members who were engaged in preparing papers for the Academy at the time of their death should both have chosen titles commencing with the words, "The duration of life."

DR. T. HERRING BURCHARD then read a

MEMOIR OF THE LATE FREDERICK D. LENTE, M.D., which was an eloquent eulogy of the deceased. In many respects, he said, Dr. Lente's professional career was anomalous, as were the rare simplicity and purity of his personal character. Extreme conscientiousness was described as his distinguishing characteristic, and his feeling of professional accountability and keen sense of justice, even in the most trivial matters, were

dwelt upon. At Saratoga, at one time, he had been treated with the most vicious intolerance, but he had borne the trial with admirable magnanimity, and had only wondered that such smallness and bigotry could be found in a profession like that of medicine. All that he did was done with rare thoroughness. His mind was a living thesaurus of information; yet, studious as he was, his investigations never led him into idle and profitless speculation. He was eminently practical, and as a diagnostician he was painstaking, thorough, and exact, always declining to express an immature opinion. As a therapist, his intimate acquaintance with the action of drugs, often tested by elaborate physiological researches, made him distinguished, and as a practitioner his skill in various departments of medicine was widely recognized. In the broadest sense of the word, he was "the good physician." He was an honored member of most of the medical societies, and was one of the founders of the American Academy of Medicine, as well as its first president. He had always been a distinguished contributor to medical literature, and perhaps the three most important of his papers were those on the treatment of intermittent fever by hypodermic injections of quinine, on the sedative influence of calomel, and on intrauterine medication. Dr. Lente was born at Newberne, North Carolina, in 1823, graduated at the University of that State, and, after having been an office-student of Dr. Alfred C. Post during his residence in the city, received the degree of Doctor of Medicine from the Medical Department of the New York University in 1849. For two years he served under Dr. Valentine Mott, at the New York Hospital, and then received the appointment of surgeon to the West Point Foundry, at Cold Spring, on the Hudson. There he achieved extraordinary success as a practitioner, and soon became known as a consulting physician and surgeon from New York to Albany. In 1871 he decided to remove to the city of New York, and he here received the appointment of Professor of Gynecology and Diseases of Children at the University Medical School, as well as that of Assistant Surgeon to the Women's Hospital. On account of ill-health, however, he was obliged to return to the country in the following year, and he remained at Cold Spring until 1875. He was then compelled to make another change by reason of physical disability, and from that time began to practise at Palatha in the winter and Saratoga in the summer. He died at Cold Spring, on the 13th of October, in the sixtieth year of his age, and a wife and several children survive him.

The scientific paper of the evening was then read by DR. FESSENDEN W. ORIS, with the following title:

ON THE RAPID EVACUATION OF STONE FROM THE BLADDER AFTER CRUSHING; WITH PRESENTATION OF A NEW AND SIMPLIFIED EVACUATOR.

He commenced by saying that the revolution which had occurred within the last five years, in regard to lithotripsy, might be said to be now complete. The method of Prof. Bigelow had been finally accepted in Europe as well as America, and the distinguished surgeon had found enthusiastic imitators everywhere. He then proceeded to quote from Dr. Bigelow's paper before the International Medical Congress, in London, in 1881, in which he gave a careful *résumé* of the past history of the subject and referred to his own achievements with characteristic modesty. From the time of Civiale up to 1878, there had been little change in the operation of lithotripsy and the duration of each sitting was kept as brief as the skill of the surgeon, with the fear of cystitis always before him, could make it. Three minutes was about the time usually allowed for a sitting, and the use of anæsthetics was exceptional. Now,

however, anæsthetics are almost universally employed, and the sittings were indefinitely prolonged, sometimes extending even more than three hours. Dr. Otis described the original evacuator of Sir Philip Crampton, devised in 1846, and its modification by Mr. Clover, of London, by the attachment of a glass receiver to the bulb; large drawings of these and the later instruments described having been hung upon the wall. Clover had subsequently made a further modification of the apparatus by the addition of a vertical chamber, and Dr. Bigelow cheerfully granted that his instrument was the only one in the possession of the profession of any value until the time that he brought forward his own. The reasons that Bigelow had achieved such extraordinary success were, because he understood the remarkable tolerance of the bladder and because he employed a large catheter for evacuation.

There was, however, a well-marked hiatus between Clover and Bigelow, and this Dr. Otis claimed to have filled himself by the results established by his researches in regard to the true size of the urethra. Up to the year 1874, all the standard authorities placed the normal calibre of the male urethra at twenty-one millimetres; but in that year by means of his urethrometer he had demonstrated indisputably that the normal calibre was thirty-two millimetres. In his earliest monograph Prof. Bigelow had stated that whether the views of Otis were adopted or not, there could be no doubt that the urethra could admit a much larger tube than that commonly attached to Clover's or the French instrument. Before the announcement of the result of his (Otis's) investigations in 1874 and 1875, no one had ever claimed that the urethra was as large as it was now universally conceded to be. At the International Medical Congress, Bigelow had declared that the small catheter of Clover's instrument had retarded progress for half a century; so that the hiatus was thus completely and satisfactorily filled.

Dr. Otis now related two cases occurring as long ago as March, 1876, and November, 1877, in one of which, although the patient was sixty-four years of age, one hour and ten minutes were consumed in the operation, while in the other it took one hour and a quarter. He felt sure that many other surgeons also had resorted to equally long sittings before the method of Bigelow was published. He claimed, therefore, that the latter did not discover the tolerance of the bladder under surgical procedure. Bigelow did much more than this, however. He utilized all the points that he had gained by study and experience, and thus achieved one of the most brilliant surgical triumphs of modern times.

The relation of the size of the urethra to the size of the penis, as first formulated by him (Otis) in his paper of 1875, was practically invariable, and deviation from this rule was abnormal. Before performing lithotomy it was his practice to put the urethra in the best possible condition, and to remove any obstructions that might exist, as the chief danger from the operation was the liability of injuring the deep portion of the urethra. The smallest evacuating tube that ought to be used was No. 27 of the French scale, and the largest, No. 32. Bigelow, however, advised that the tube should not be less than 25 millimetres, nor more than 31 millimetres. Dr. Otis then stated that with a tube of 30 millimetres he had evacuated 300 grains of crushed coral (which closely resembled the mixed calculus in its structure) from a bottle fitted up to represent the bladder, in 30 seconds, while with a No. 27 tube, only 3 millimetres smaller, he had evacuated only 180 grains in the same period of time. As a rule, the tube should be two or three sizes smaller than the calibre of the urethra.

Prof. Bigelow recommended the straight tube in preference to the curved. The objection to the straight catheter was the difficulty of introduction, especially if

there was any prostatic enlargement; and in order to obviate this, Dr. Otis had constructed an instrument which was straight throughout its length, but had a small curve just at the extremity. Notwithstanding the fact that Bigelow had stated that the large catheter was the single agent to which progress in lithotomy was due, there was still another element of success, and that was the more powerful evacuating instrument now employed, and for this advance the profession was indebted to Prof. Bigelow. The objections to his first instrument were that it permitted the return of the *débris*; and also the too free passage of air into the bladder. Dr. Otis next described Sir Henry Thompson's instrument, devised in 1879; which was provided with a receiver into which the fragments dropped directly, and also with a metallic connecting-tube and stop-cock. The same objections were found in this, and in 1880 he introduced certain changes in it to prevent a return of the *débris* into the bladder. Thompson's chief aim was to secure as direct a route as possible from the bladder to the receiver.

Dr. Otis remarked, however, that for a long time he had used Bigelow's original instrument with much satisfaction, and in the present year Mr. Reginald Harrison, of Liverpool, had made the statement that, after trying several modifications, he had found none that he liked as well as this. After describing the various changes that Prof. Bigelow had made from time to time in his instrument, which had rendered it more perfect in its action, but also more complicated and expensive, he went on to say that in the early part of 1883 he had achieved a brilliant success in his latest evacuator, which he exhibited. In this, the route of the fragments between the bladder and the receiver, was greatly shortened, and the prevention of their return was accomplished by a strainer, which was prolonged to the centre of the bulb. Dr. Otis had used it in one case, and its action had appeared to him to be perfect. When describing Sir Henry Thompson's last apparatus, he remarked that the weight and expense of both these instruments seemed to him to be objections, and he had therefore devised one himself, which was considerably lighter, simpler, and less costly.

The apparatus consisted of a strong annealed glass bulb, two inches in diameter, into one side of which entered a tube connected with a rubber air-bulb, the tube projecting within the glass bulb, and extending nearly to its tip. Into the bulb, on the other side, the tube connecting with the evacuating catheter projected, and passed downward nearly to its bottom; while beneath it was a glass receiver attached by a strong bayonet-joint. The entrance of air into the bladder was cut off by means of a stop-cock. The glass-bulb could be filled either by pouring the water into it, or by exhausting the air from it, and then allowing it to fill itself. When it had been filled, the evacuating catheter was to be introduced into the bladder, and the removal of the fragments accomplished by making pressure on the air-bulb. Dr. Otis had prepared a bottle to represent the bladder, and had placed a quantity of crushed coral in it; when regular pressure was made by the hand on the air-bulb, the fragments of coral were seen to pass down into the vacuum without exhibiting the slightest tendency to return. This Dr. Otis explained to be due to the direction of the current, which was controlled by the position of the two orifices of the two tubes in the glass bulb, a dead point being produced at the top of the receiver.

The apparatus was perfectly simple, no strainer being required to prevent the return of fragments, as in Bigelow's instrument. The strainer was liable to become clogged with mucus, and Prof. Bigelow always insisted on the necessity of keeping it perfectly clean.

The price of Otis's instrument was just one-half that of Bigelow's.

DR. EDWARD L. KEYES, being called upon by the Chair, remarked that, as far as he could see, very little discussion was possible about the admirable apparatus which had been exhibited this evening. In regard to one or two points touched upon in Dr. Otis's paper, however, he would like to say a few words. The tolerance of the bladder had certainly been known as long ago as Civiale's time, for he and others sometimes occupied as much as half an hour at a sitting. But as they could not evacuate, and as there was considerable danger of injuring the bladder with the instruments then employed, they found it advisable to shorten the sittings to three or four minutes. Civiale, while he shortened the sittings, also shortened the time between the sittings, and found that he could get better results in this way than by protracted sittings at greater intervals.

As to the size of the evacuating tube now used, this was undoubtedly due to the labors of Dr. Otis; but at the same time this was not, in his opinion, the main element in Bigelow's success, although the latter had distinctly stated this to be the case. Prof. Bigelow's brilliant achievement was, in fact, the result of the crystallization in his mind of all the ideas to which modern lithotripsy owed its birth; and among the elements contributing to it, he thought, ought to be mentioned the more perfect instruments for crushing now in the hands of the surgeon. The operation could be performed perfectly well with a No. 12 English tube; though, of course, the larger the tube the shorter would be the time required for evacuation.

He never yet had had to cut a urethra as a preliminary to lithotripsy, except just at the meatus; but if he were to meet with a case of stone in which there was organic stricture, he should much prefer external incision to the operation of crushing. In one case, where there was prostatic enlargement, he had operated very successfully, using a small evacuating tube; but the same patient had afterwards suffered from severe inflammation after having lithotripsy performed by so careful an operator as Prof. Bigelow. This, he believed, was solely due to the larger tube which the latter had employed. The only authorities of high reputation who used the very large tubes were Otis, Bigelow, and Harrison, as most surgeons were apprehensive of causing injury to the urethra with them.

As to Dr. Otis's new instrument, he had never seen it until that morning; but he could only express himself as highly delighted with its efficiency, simplicity, cheapness, and portability. Among its chief advantages seemed to him to be the employment of air-pressure instead of water-pressure, and the construction of the bulb of glass so that the operator could see exactly what was going on at every stage of the operation. The small size of the bulb was certainly a great advantage in most respects, but there might be cases, he thought, in which more water than it could hold would be desirable. One other point occurred to him. If the fragments were of any size, there seemed to be no doubt that there would be no danger of their return into the bladder; but he did not know how this would be if there were a fine phosphatic dust, such as was found in certain instances.

Prof. Bigelow's latest apparatus he had used repeatedly, and with perfect satisfaction; but his first instrument he thought very objectionable, because it allowed so much frothy swashing in the bladder that the operator could not tell how he was progressing.

DR. OTIS, in replying to Dr. Keyes, remarked that it might perhaps be true that Sir Henry Thompson, as a rule, adhered to the old practice of using small tubes, but it was also a fact that he repeatedly employed a

No. 30 instrument. Where there was prostatic enlargement, he (Dr. Otis) had invariably inculcated the advisability of using as small a catheter as would evacuate the fragments. Where there was either a contraction at the meatus, or a stricture more deeply seated, he always cut the urethra some little time before performing lithotripsy, so that the wound might be entirely healed and the urethra in the best condition possible when the operation was done. The object in having the bulb of his instrument so small was on account of its greater portability and greater freedom from the danger of breaking. It could be readily inverted, so that water could be poured directly into the bulb when desirable.

At the conclusion of Dr. Otis's remarks the Academy adjourned.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday Evening, Oct. 25, 1883.

THE PRESIDENT, JAMES TYSON, M.D., IN THE CHAIR.

DR. THOS. J. DUNN, of West Chester, Pa., presented the report of the

AUTOPSY OF A CASE OF PLEURO-PNEUMONIA IN A COW.

The disease was of ten days' duration, and the prognosis being hopeless, the animal was killed. The rectal temperature was 104.8°, respiration 89, pulse 42, eyes sunken, ears drooped, back somewhat arched, great difficulty in walking, slight exertion causing dyspnoea and coughing. Respiration was jerky and shallow; there was slight muco-purulent coryza. Percussion gave absolute dullness over entire right side and lower part of left, while over the upper portions resonance was normal or slightly exaggerated. Auscultation: absence of vesicular murmur on right, and even bronchial breathing only could be detected over circumscribed areas; over upper part of left side, auscultatory signs normal; below, nothing could be heard.

Autopsy.—Much emaciation; muscular tissue of a deep mottled red, exuding on pressure much venous blood. The pleural cavities contained about six quarts of clear serum, with a few flakes of lymph. Both layers of the pleura were covered with from one to three inches of thick, tough, unorganized lymph, the membrane itself being rough and congested. The weight of the membrane was estimated to be twelve pounds. The left lung was crepitant throughout, but congested below; the right lung was completely carnified, while some of the largest bronchi were filled with plastic plugs, which, on removal, left the mucous membrane rough and swollen. The other bronchi had their mucous membrane swollen and congested. Frothy muco-pus exuded from the cut lung surface when scraped. The solidified lung was estimated to weigh fifty pounds, the normal being three and a half pounds. Right heart was dilated and its tissue soft; as the animal had been bled after death, the vessels were nearly empty. Other organs healthy. Microscopical examination of the blood ($\times 680$ to $\times 1,000$) from the heart showed innumerable globular or oval micrococci from 0.35 to 0.5 mm. They were rarely grouped in colonies, more frequently in pairs, but usually single. Lung scrapings showed granular cells, shreds of tissue, and innumerable micrococci. The cells contained bodies resembling the micrococci of the serum; they were insoluble in ether, neither did they stain with aniline-green nor hæmatoxylin, whether in an acid or alkaline solution, while the remainder of the cell readily colored. Aided by Dr. Martin, of West Chester (who assisted him in the microscopical examinations detailed), he has commenced culture experiments which in one instance have succeeded.

THE PRESIDENT said that he had seen a similar case sixteen years ago, but at that date attention was not paid to the presence or absence of micrococci.

DR. H. M. FISHER presented the specimens from

A CASE OF TYPHOID FEVER, WITH ABORTION IN THE THIRD MONTH; DEATH; ULCERATION OF PEYER'S PATCHES, AND HIGHLY FATTY KIDNEYS.

L. K., æt. 43, married, German, was admitted to the Episcopal Hospital September 15, 1883.

The following notes were taken by Dr. George M. Boyd, Resident Physician: She stated, on admission, that she had been sick two weeks, that the trouble began with general lassitude and headache. Her bowels had been loose, and she had passed blood in small quantities. The abdomen was somewhat tympanitic on percussion, and there was pain complained of on pressure over the right iliac fossa, and gurgling on pressure over this region. The patient seemed rather unusually prostrated; tongue coated with brownish fur and very dry.

Sept. 17.—Evening temperature, 103°; bowels loose. She complains of pain in both lumbar regions, apparently along the course of the colon.

19th.—Heart's action weak, but otherwise patient seems to be doing well.

20th.—Temperature 103°. Heart very feeble and irregular. Patient presents all the symptoms of profound shock. Menstruation stated to have come on suddenly this morning, with much loss of blood. Vaginal examination reveals widely open os and large uterus. Several large clots were removed, but failed to remove placenta, which was tightly adherent. Hot-water injections and ergot were ordered, with alcoholic stimulants, but no reaction took place, and the patient died at 9 o'clock the same evening.

The post-mortem examination revealed numerous enlarged and ulcerated Peyer's patches in the lower portion of the ilium; inflammation also of the solitary glands and so-called mesenteric glands. The uterus seemed about the size of a uterus at the beginning or middle of the third month of pregnancy.

The kidneys were highly fatty.

N. B.—An embryo, it seems, had been passed, but was unfortunately thrown away by the nurse with the other discharges.

DR. WOODBURY stated that he had a case of profuse bleeding, due apparently to menstruation, in the course of typhoid fever. This is contrary to what usually occurs, suppression of the menses being more common.

DR. EDWARDS said that in one of his cases, of typhoid fever during pregnancy, the woman recovered, and was delivered of twins.

DR. FISHER related another case in which the woman died when at full term. In articulo mortis she gave birth to a child that looked like a seven months' child. Its growth seemed to have been delayed by the presence of the disease.

DR. DUNN said that he had a case of delivery accompanying the development of scarlet fever. The woman recovered.

DR. SEILER read a paper on the

PATHOLOGY OF PHTHISIS AND ITS LARYNGEAL COMPLICATIONS,

in which he gave his views regarding the pathology of tuberculosis, and of phthisis, and of the laryngeal complications of the two diseases. He defined tuberculosis as an auto-infectious disease, manifesting itself primarily by the production of minute neoplasms, called miliary tubercles, which rapidly undergo retrograde metamorphosis ending in caseation, being due to the dissemination of infectious material throughout the lymph

channels. This infectious material consists in cheesy matter due to scrofulous inflammation which may remain encapsulated for a long period. He then described the histological characteristics of tubercles, and showed how they could produce consolidation of the lung tissue by exciting secondary inflammation.

He then entered upon the consideration of the disease known as phthisis, and gave the following definition of it: Phthisis is a progressive consolidation of the lung tissue due to a more or less localized inflammation affecting primarily the apices, and undergoing retrograde metamorphosis; it is an inflammatory disease. He then gave a description of the pathological processes as they are observed in the lung tissue during the progress of the disease, and gave it as his opinion that the different forms and stages of phthisis, as they are described by many authors, are merely differences in the severity and extent of the ulcerative process. As etiological factors, he mentioned the various causes which produce a lowering of the vitality of the general system, thereby producing a predisposition on the part of the respiratory organs to chronic inflammation; among others he named hereditary peripheral nerve irritation, hypertrophic nasal catarrh, insufficient aeration of the blood, etc.

An elevation of the vitality of the system at large would prevent an outbreak of the disease, and lead to recovery in cases where not too much lung tissue had been destroyed. This elevation was to be produced by proper feeding and healthful exercise in the fresh air, more than by the exhibition of drugs. On the other hand, tuberculosis was always fatal and treatment was of no avail; but a great deal could be done to prevent the formation of the initial lesion of cheesy deposit by elevating the system of scrofulous patients early in life, thus preventing the outbreak of tuberculosis later. The laryngeal complications of both diseases were then considered in detail, and their differences pointed out. According to the reader, the laryngeal lesions never appear prior to the lung disease in phthisis; they are characterized by peculiar pallor of the mucous membrane; the tumefaction generally affects the posterior portion of the organ, and the ulcerations are shallow and have a tendency to spread over the surface; and tubercular or cheesy deposits are never found in the tissues of the larynx in phthisis. In tuberculosis, on the other hand, tubercular deposits have been found in the larynx prior to the lung implication; the mucous membrane is of a livid-red color; the tumefactions are more commonly observed in the anterior portions of the larynx, and the ulcerations are deeper with raised edges and often extensive destruction of tissue.

The paper closed with the remark that the indiscriminate use of the terms phthisis and tuberculosis, when speaking of lung disease, in our literature, was calculated to mislead the student, and make careful investigation into the pathology and etiology of these diseases extremely difficult, if not impossible.

DR. J. C. WILSON said that he had listened with interest to the reading of the paper. The field covered by the writer is too great to permit the points to be discussed in detail. Two points, however, appeared to warrant comment. First, Dr. Seiler had several times used the expression, "tubercular material not derived from the exterior." If he had understood the paper aright, Dr. Seiler had not indicated his views as to the nature and source of this "tuberculous material." Does he follow the older doctrine—that of Beebe? Or has he some new opinion as to the etiology of tubercle? Secondly, Dr. Seiler failed to make clear his means of recognizing tubercle, either clinically or in the laboratory. It would be of interest to have the writer's views upon this vexed question. In a recent work, Hamilton,

of Aberdeen, again seeks to establish a histological criterion for tubercle—the presence of giant-cells under a peculiar arrangement. This pathologist points out two modes of degeneration for tubercle: 1. Caseous; 2. Fibrous. To the latter, Dr. Seiler makes no allusion.

He thought, further, that the author of the paper had scarcely emphasized with sufficient force the presence of tubercle among the lesions in the various forms of phthisis as seen in post-mortem examinations.

He heartily concurred in the hopeful view as to the curability of certain forms of chronic lung disease when treatment is instituted at an early period. Nothing has exerted a more unfavorable influence upon the therapeutics of such diseases than the false view that the constitutional tubercular diathesis invariably antedates the local lesions of pulmonary consumption.

DR. F. P. HENRY remarked that he was not inclined to draw so broad a line of distinction between that form of pulmonary disease in which miliary nodules predominate and that in which the deposit is in larger caseous masses. Like Dr. Seiler, he was by no means convinced of the primary importance of the bacillus as a cause of tuberculosis; but was inclined, however, to attribute to it a prominent part in the production of the secondary symptoms of phthisis, those of systemic infection, which are largely septic in character. The symptoms of interference with oxidation, caused by extensive destruction of pulmonary tissue, are subordinate to those of systemic infection caused by absorption of the contents of cavities. The presence of the bacillus in the contents of these cavities is indispensable to the production of changes capable of producing this systemic infection. A small, ulcerating cavity communicating with the absorbent vessels is more disastrous in its effects than a larger cavity shut out from the absorbents by a lining membrane or wall of fibroid tissue. He understood Dr. Seiler to deny the existence of the giant-cell, and to make the statement that cross sections of blood- and lymph-vessels have been mistaken for it. Dr. Henry did not agree with him in this view, but thought the irregular contour of the giant-cell and its granular protoplasm were sufficiently characteristic.

Additional evidence of the existence of this cell was furnished by the experiment of introducing beneath the skin of an animal, two thin glass covers fastened together. In the interspace of the glasses giant cells have been found, and in such an experiment there can be no cross-section of vessels. Dr. Seiler had several times referred to what is known in this city, and elsewhere, as Formad's theory of tuberculosis, which is, that in certain animals predisposed to phthisis, and presumably in some human beings, the lymph spaces are abnormally small, or, in other words, that in a given area of tissue there is to be found a greater number of endothelial cells than in non-strumous animals. Dr. Henry did not think this theory should be so extensively quoted until some more serious attempt had been made to establish or refute it. This might, he thought, be readily done by counting the cells in a given area of the tissue of strumous animals, and comparing their number with that contained in the same area of tissue of non-strumous animals. He did not think any greater difficulty would be met with in this attempt than has been successfully encountered in the enumeration of the blood cells.

DR. BRUEN said that he believed in a hopeful prognosis in the early stages of many varieties of phthisis, even when the process of phthisis was advanced; the management of cases was more successful when the lesions are localized; less advanced lesions are more grave when the lesions are widely disseminated. Dr. Bruen thought that it had been proved that phthisis could be produced by inhalation of inorganic irritating

particles, especially if there was inherited predisposition to phthisis, or an artificially damaged constitution. May not bacterial elements be among the irritants capable of developing phthisis when inspired in larger numbers? and he thought they might be even more capable of creating damage than inorganic materials, because they possess the power of proliferation. Dr. Bruen agreed with Dr. Seiler in his views in the main, and considered his paper most instructive and interesting.

DR. MILLS thought it worth while to note the frequent occurrence of tuberculosis among those afflicted with chronic nervous and mental diseases. At the institutions for the feeble-minded and insane, phthisis or tuberculosis is a common cause of death. This fact, he thought, would lend support to the views of Formad rather than to those of Koch.

DR. J. T. ESKRIDGE had observed that some who had participated in the discussion referred to the views of the pathology of tuberculosis expressed in the paper of the evening, and to those entertained by Dr. Formad, in order to prove the same thing. He regarded the theories of each of these men as widely different. If tuberculosis is the result of inflammation in a person whose lymph-channels are abnormally narrow, as claimed by the latter, he could not see that phthisis differed from tuberculosis, as maintained by the former. In regard to tuberculosis being frequently developed in chronic diseases of the brain and cord throwing light on the pathology of the former, he thought the association of these diseases proved nothing more than that a prolonged period of lowered functions of the body was a favorable condition for the development of tuberculosis. He confessed that he did not know what to believe with reference to the pathology of tuberculosis; enough, to his mind, had not been proved to firmly establish any theory yet advanced so that it might be accepted as positive fact. Dr. Eskridge agreed with Dr. Shakespeare in demanding more pathological investigation following the clinical observation of the disease, before he could accept any view as positive of the pathology of tuberculosis. Dr. Eskridge called attention to the fact that many of the best clinical observers of large experience, such as Flint, DaCosta, and Hughes Bennett, considered tuberculosis and phthisis to be identical.

DR. DAVIS asked Dr. Seiler if he taught that tubercle was caused by a caseous focus? He was answered, yes. It is important to know whether this is the case or not, as the German surgeons excise caseous glands not so much for the deformity they produce, as to obviate the liability to general infection. Would Dr. Seiler sanction this practice? As regards the possibility of cure, he believed with Koster, Billroth, and König, that tubercle is a local affection and not a general disease. He has seen tuberculosis as marked in the knee as in the lung, the miliary tubercles being within an eighth or quarter of an inch of each other. He has also seen tumor albus of the knee recover without operation. If the tuberculosis can get well in the knee, he believes that it can, in some cases, get well in the lung also.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, October 24, 1883.

THE PRESIDENT, WILLIAM M. WELCH, M.D., IN THE CHAIR.

DR. JAMES FARRAR STONE presented a paper on
THE RELATION OF PHYSICIANS TO LIFE INSURANCE.

In the year 1859, he said, the regular life insurance companies of the United States, reporting to the New

York Insurance Department, had in force, in round numbers, 50,000 policies, representing a total insurance of \$140,000,000. At the close of 1882, according to the same authority, the number of policies in existence exceeded 660,000, insuring more than \$1,600,000,000. During last year, these companies, thirty in number, issued about 92,000 new policies, and distributed among their policy-holders or their representatives over \$52,000,000—an average of almost \$150,000 for every day of the year, Sundays included. Nor do these figures, large as they are, fairly measure the growth and extent of this business.

Within the period covered by these statistics, and not included in them, new forms and methods, calculated to bring insurance to the notice and within the reach of all classes in the community, have been devised and introduced with such success, as to make it altogether safe to assert that but a moiety of the volume of business, and a yet smaller proportion of the persons carrying insurance of some sort, is represented in the returns quoted above.

Life insurance was, in its origin, essentially an outgrowth of medical science. Whose brain it was that first conceived the thought, we do not know, but we do know that until the law of the absolute uniformity in the average duration of life, when large numbers are compared, was demonstrated, life insurance, as a science or a business, was an impossibility. The mortuary records and observations which furnished the data from which this law, the corner-stone of life insurance, was at length deduced, were mainly the result of the labors of the medical profession, and life insurance is still dependent upon medical aid for its safe existence and healthy growth.

Important contributions to vital statistics may be confidently anticipated from the rapidly accumulating mortuary experience of the companies. These records are kept with a care and accuracy unattainable elsewhere, and the deductions drawn therefrom will be correspondingly valuable.

Already it has been demonstrated that the average longevity in civilized countries is gradually rising. The experience of American companies seems to be slightly more favorable than the British, but it would be premature, as yet, to conclude that this is due to greater longevity in the community at large. Indications point to a slight decrease in the ratio of deaths from phthisis, and an increase in those due to kidney affections. That greater results have not already been reached is due to the brief time and limited experience covered by the records. These observations must throw light upon such questions as the greatest duration of human life, the geographical distribution of diseases, the effects of race, occupation, hereditary tendencies, and physical condition and configuration, and many kindred topics.

The special relations the physician assumes in becoming the medical examiner of a company, and his duties in that capacity, are at once the most practical and difficult parts of my subject.

Regarding the ethical relations of the position, it is evident that he owes paramount allegiance to the interests of the company whose officer he is. The well-being of the company—and by this term is not meant any corporation, but the whole membership constituting it—demands the maintenance of a longevity at least equal to that of the general population. Under present conditions, those seeking insurance fall below that standard. This adverse selection the medical officer is appointed to prevent. To fulfil this trust he must weigh every candidate in the scales of physical fitness alone, and be blind to every alien consideration whatsoever. But while thus loyal to the company, he must not lightly regard the claims of the applicant.

To deny to any man the privilege of insurance is never a trifling thing, and it may be a serious and lasting injury.

How shall we decide, in view of the conflicting claims of the applicant and company, those border-line cases which so often arise? But one reply can be given. When doubt remains after full investigation, always give the company the benefit of the doubt. When compelled to deny an application for insurance, the examiner may occasionally render a more than compensating service to the candidate, by revealing his timely discovery of an unsuspected disease, amenable to treatment in its early stage. Many valuable lives have thus been saved, or prolonged, and it is worthy of mention as an incidental benefit of insurance examinations.

The relation of the examiner to the agent ought to be, and generally is, one of coöperation, yet of absolute independence. The aim, the true interests of both are identical, however they may sometimes seem to clash. But the motives that sway the one must never be allowed to influence the judgment of the other.

How can the medical examiner best discharge the practical duties of his office? The first and obvious answer is, by having a clear conception of what those duties are. In general, they may be comprised in the obligation to recommend none but healthy lives for insurance. But inasmuch as perfect health is a condition most rarely, if ever, met with in actual experience, it is evident that something less than this ideal standard must serve for his working rule. What shall it be? Some companies have solved this problem by establishing a sliding scale, according to which all risks are graded into classes, extra good, good, fair or average, and poor. Others encourage the examiner to report mainly on the physical condition and habits, leaving points of hereditary influences, and other general questions, to be decided at the home office. This plan relieves the local examiner of a certain amount of responsibility, and has the apparent advantage of referring to experts the weighing of points, upon which the average medical man has had but little experience. As the whole application comes under the review of the medical board in any event, it may be questioned whether the judgment formed from personal contact, in view of *all* the circumstances affecting the risk, is not of more value to the company than one with certain elements ignored.

I cannot do better, just here, than to quote the formal question, closing the medical examiner's certificate on the application of a prominent company: "Is the person, in your opinion, as good a life for insurance as the average of persons of the same age, who are of sound constitution, in good health, and whose family history is good, and do you, acting in the interest of the company, advise the acceptance of the risk?"

To my mind, this is the most fair, logical, and comprehensive statement of the object of the examiner's work with which I am acquainted. To answer the question fairly requires a balancing of all circumstances affecting the life favorably and unfavorably, and an unqualified decision upon the relation of the risk to the standard assumed. With a clear conception of the purpose of his examination, the physician will do well to remember that the applicant for insurance stands in a relation the very reverse of that occupied by a patient. The latter comes for relief, and is ready to aid, so far as he can, in the discovery of his ailment. The former approaches with the assumption of health, and the examiner must detect, unaided, any fallacies in that assumption. The task is, not infrequently, made vastly more difficult by the deliberate purpose to gain the end by deceit.

One of the knottiest questions to answer satisfactorily, in many instances, is that respecting the applicant's use

of liquor and narcotics. The importance of the information sought is commensurate with the difficulty of obtaining it. According to Neisson's statistics, as quoted in *Parke's Hygiene*, "In intemperate persons, the mortality at twenty-one to thirty years of age is five times that of the temperate; from thirty to forty it is four times as great, becoming gradually less with advancing age."

But what is a temperate use? To quote from an English writer on insurance: "Whatever may be our doubts as to the injurious effects of small quantities of narcotics and stimulants upon the system, we should have little hesitation in declaring that when they are long used, and in large quantities, they must, in the vast majority of cases, impair health and shorten life, so that a life so exposed needs higher rates."

Practically, then, it is not sufficient to trust to general statements, but it is important to learn just how often and in what quantities stimulants are taken. With all possible care, the examiner will sometimes be most egregiously deceived.

The family history presents difficulties, often insuperable, in the lack of knowledge of the causes of death among the immediate relatives. When we push our inquiries a generation further back, it is remarkable how little the average citizen can tell of his grandparents. Yet much may be learned or excluded by persevering inquiry. It is worth the effort if it be true, as Ribot asserts, that "Longevity depends far less on race, climate, profession, mode of life, or food, than on hereditary transmission, . . . and will assert itself above many influences generally fatal to a high average duration of life."

It is in the physical examination that the best work of the examiner is demanded. Closeness of observation, system, thoroughness, accuracy, must be his watchwords. He must insist on favorable surroundings, quiet and privacy, on time sufficient for examination without haste, on repeated interviews when needed, and, above all, on entire freedom from outside pressure or dictation in making up his verdict. But his whole duty is not fulfilled in the recognition of existing morbid states. It is required of him to detect latent tendencies to disease, to foresee the coming evil in the shadow it casts before.

What, then, have been the results of the medical examination of lives, as tested in the experience of American companies? In general the medical selection may be said to effect a diminution in the death-rate among insured lives as compared with the whole population, which continues at a lessening ratio for about six years, after which its influence disappears, and the mortality approximates that of the community at large.

Three propositions are regarded as established in the experience of the largest American company:¹

1. That the advantage of selection diminishes at all ages with the duration of the policy.
2. That it decreases very rapidly among those who insure at the younger periods of life.
3. That it decreases more slowly at middle life and among older insurants, and probably never entirely disappears.

DR. O'HARA then read a paper on the

USE OF CACTUS GRANDIFLORUS IN CARDIAC AFFECTIONS.

He was called to see E., æt. seventy-four, May 19, 1883, who had bronchitis and some œdema of the lungs; his feet were slightly anasarca; there was no kidney difficulty, though he passed but little water; he had a

mitral regurgitant murmur; some irregularity of heart's action; occasional intermission; pulse 90; he had arcus senilis and atheromatous arteries. The diagnosis was dilatation and failing heart, compensation gone by. He was given digitalis, iron, and nux vomica. He became more swollen generally, had orthopnea, suffered very much, heart becoming very intermittent on the least effort. The treatment was kept up, with addition of saline laxatives for extreme costiveness. He was going downwards daily, and on June 22d the pulse was very intermittent, and only thirty-four beats to the minute; very water-logged in the lungs and over whole body. Thinking that he could be no worse off with any other medicine, and recalling the fact that I had seen in *Flint's Clinical Medicine*, the statement made that the cactus grandiflorus, in from three to five minim doses, is a valuable heart tonic, I concluded to give it a trial. I ordered it in five minim doses of the fluid extract (Parke, Davis & Co.), every four hours. In a few days every symptom improved, the dropsy disappeared, he could lie down at night to sleep. He has been taking the medicine now for five months—the last month fifteen minims, three times daily, with marked improvement; the dropsy has left him; he has the mitral murmur yet, and some irregularity, but rarely an intermittent pulse.

On another occasion (in a patient similarly affected) I used digitalis, and it failed me. Rev. Mr. V. has hypertrophy with dilatation, commencing mitral degeneration, also commencing aortic valve disease; has pronounced mitral valve regurgitation; he had violent palpitations, irregularity of pulse, and intermissions; pulse between 40 and 50. Here, I am satisfied, digitalis and convallaria aggravated matters, while the cactus relieved the pain, stimulated the heart, and removed irregularity. The heart never comes up above 50 to the minute, but the horrible feelings of death, with the sudden stoppages, are relieved.

In the case of Mrs. L.—dilatation, with failing heart from age, sixty-five years—I have used nothing else, and it has satisfied me. This person had vertigo, anæmia of the brain, dropsy, etc., all due to the failing heart, and the use of cactus inclines me to think that it was a good cardiac tonic.

I introduce cactus to the notice of the Society, because I have found it to have been little used. Many physicians, if they have like experience to mine, must recall the fact that digitalis at times disappoints them, and I would ask them to try this under those circumstances as a substitute. Of course, I have not had much experience with it, and I would like the result of my experience to be confirmed by that of others.

There are two preparations—cactus grandiflorus (night-blooming cerus), and cerus Bonplandii—of apparently same qualities, the latter of which I have made no use.

My limited experience goes to show of cactus grandiflorus:

1. That it is a pure cardiac tonic, whether for functional or organic disturbances, especially in cases of mitral regurgitant disease.
2. Convallaria, though not of service in cases accompanying mitral regurgitation, appears, from Dr. Bruen's paper in *Pennsylvania State Medical Society Transactions*, to be a supplement to digitalis, not replacing it; specially serviceable in backward distention of the lungs, from mitral obstruction, and a tonic for nervous and functional diastole of heart.
3. Belladonna and strychnia will frequently serve to substitute digitalis.
4. Caffeine citrate has been found to be of no effect in my experience for heart affections, functional or organic.

¹ Report of the Mortuary Experience of the "Mutual Life" of N. Y., from 1843 to 1874, pp. 18 et seq.

CORRESPONDENCE.

THE TREATMENT OF VESICAL CATARRH.

To the Editor of THE MEDICAL NEWS:

SIR: In your issue of October 8th appears an editorial entitled "The Treatment of Vesical Catarrh," in which the usual resources of the profession employed in the treatment of this rebellious malady are enumerated, and their frequent failure referred to. Two additional remedies, not ordinarily used perhaps, you suggest to the practitioner as being worthy of trial in this condition—namely, chlorate of potassium and salicylate of sodium.

Now what estimate will be placed by the profession upon the value of these remedies in the treatment of vesical catarrh I will not venture to predict: for myself I will say that I have little, if any, confidence in their being able to effect better results than those following the employment of many other medicines prescribed for this disease. I base this opinion upon the fact that other germicide and antifermentative agents, such as the bichloride of mercury (now stated to be the best of this class), carbolic acid, borate of soda used locally, and benzoic acid and benzoate of ammonia internally, have been proved, in the great majority of the cases in which they have been exhibited, to possess but feeble properties, so far as regards any permanent benefit they may have conferred upon the patients.

If, therefore, future experience with the drugs you suggest confirm my expectations as to their curative value in vesical catarrh, it may be concluded that, so far as can be learned from your editorial, the treatment of this disease yet remains as ever, one of the glaring opprobriums of our art, which the energies of the profession should endeavor to remove as speedily as possible.

Apropos of this sentiment, I desire to call your attention to the fact that in your enumeration of the various methods of treatment for vesical catarrh, you have overlooked what many good practitioners consider to be the most prompt and potent means yet suggested for the cure of this troublesome malady, and a long step in advance of the conventional modes of treatment. I allude to a method of treating catarrh of the bladder by strong injections of nitrate of silver, brought to the notice of the profession by Prof. T. G. Richardson, of New Orleans, in a clinical lecture published in *THE MEDICAL NEWS AND ABSTRACT* in 1879. As opposed to the weak injections of the nitrate recommended in your enumeration, Prof. Richardson injects a four ounce solution of the strength of twenty to sixty grains to the ounce of water, according to the urgency of the symptoms. If this cause much pain—a result by no means constant—a solution of common salt or of the iodide of potassium is injected into the bladder, which modifies the so-called caustic action of the nitrate. No excessive reaction, if any whatever, followed this procedure.

It is but fair to state that this treatment has been characterized by a leading specialist in this country as "irrational and extremely injudicious," but this criticism, I think, is sufficiently met by the published experience of Prof. Richardson and of others who have boldly employed it with the most gratifying results. My own limited experience in its use was gained in the following way:

I had under treatment a case of vesical catarrh in a man, forty-six years old, of intemperate habits, a native of Ireland. The condition had existed in a mild form for some years as the result of a stricture in the membranous portion of the urethra. The latter was thoroughly dilated, when a most acute cystitis immediately supervened. So intense was the incipient con-

gestion of the walls of the bladder that an active hemorrhage ensued, which quite filled the organ with clotted blood, the presence of which gave rise to the most atrocious suffering in the way of tenesmus I have ever witnessed. Following the breaking up and expulsion of this bladder-clot, the inflammation of the mucous surface commenced. Large quantities of ropy muco-pus digested in foul-smelling ammoniacal urine were frequently voided. Soon there were observed portions of exfoliated mucous membrane also floating in the urine, indicating ulceration of the bladder. The constant suffering, despite the treatment employed, began early to tell upon the nervous system, previously rendered unstable by a life of intemperance and abuse. The patient was almost maniacal at times from the unrelenting tenesmus experienced while voiding the contents of the bladder. He ate and slept but little, rapidly lost flesh, and altogether became truly an object of commiseration and sympathy.

During the four weeks of my attendance, I had used every means of which I had any knowledge to relieve the case. The bladder was frequently washed out with warm water and warm water carbolized. Injections were made of borate of soda (Thompson's), nitrate of silver, two grains to the ounce of water; nitric acid in water, and finally of normal urine, recently passed, and this left in the bladder. Such measures gave only transient relief.

Internally were administered alkalies, acids, triticum repens, buchu, hyoscyamus, benzoate of ammonia, and large quantities of milk. Opium and belladonna, in maximum doses, were exhibited per orem, per rectum, and hypodermically. Morphia hypodermically, at frequent intervals, often reinforced by the inhalation of chloroform, was required to keep the tenesmus in check, and secure sleep.

At this juncture, Dr. S. Eagon, of this city, was called in consultation, and urged an immediate resort to the Richardson method. With much apprehension as to the result of what I then considered to be a heroic measure, I consented. An injection of four ounces of pure water, containing one hundred and sixty grains of nitrate of silver, was promptly injected into the bladder. Opium and alkalies were continued, with the addition of quinine and stimulants, and especial attention given to systematic feeding. From this moment, the case began to improve. All hemorrhage ceased; the tenesmus was almost entirely relieved; long intervals of rest from micturition were secured; mucus and pus disappeared from the urine; the patient slept well; his appetite returned; and he expressed himself as fully realizing his changed condition. On two subsequent occasions, when small amounts of glutinous mucus showed in the urine, the latter was promptly cleared up by the use of a weaker injection of the nitrate, twenty grains to the ounce of water. In about three weeks from the time of the employment of the first injection, the patient resumed his business, and, so far as I know, has had no relapse.

Dr. Eagon informs me that he has successfully employed the same treatment in a number of cases, two of which have come to my knowledge, and that, at some future date, he will publish them in a systematic form with the purpose of furnishing his quota of evidence towards establishing the safety and efficiency of the method as claimed by its originator. In a most readable brochure, entitled "Chronic Inflammation of the Bladder and its Treatment," Prof. Richardson goes fully into the pathology of vesical catarrh, expounds the philosophy of his method of cure, and illustrates by cases the success which has attended its use in his hands.

Respectfully,
DALLAS, TEXAS.

HENRY K. LEAKE, M.D.

NEWS ITEMS.

THE CAUSE OF THE RECENT YELLOW FEVER OUTBREAK AT PENSACOLA. FINDING OF THE COURT OF INQUIRY.—The Court of Inquiry, convened in compliance with the telegraphic orders of the Secretary of the Navy, dated Washington, D. C., August 21, 1883, has presented the following report:

The Court of Inquiry has diligently and thoroughly inquired "into all the circumstances connected with, or which led to, the recent outbreak of yellow fever at the U. S. Navy Yard at Pensacola, Fla."

The Court has also carefully inquired:

"Whether or not proper measures were adopted to prevent the introduction of yellow fever into the navy yard aforesaid."

And the Court transmits herewith its proceedings, the testimony taken, and, after mature deliberation, reports that the following facts are deemed established by the evidence adduced:

First, "as to the circumstances which led to outbreak of fever."

Prior to August 1st it does not appear that there were any cases of yellow fever of any suspicious nature on the Naval Reserve. While we are not prepared to say that yellow fever really existed in Pensacola this season, it is not unlikely that fomites and bedding that were not destroyed during the epidemic of 1882, generated mild sporadic cases which eluded the vigilance of the attending physicians, and owing to the constant communication between the City of Pensacola and the Naval Reserve, the fever may have been introduced either through the medium of persons or fomites.

On August 3d, a commercial traveller named Frank French, visited the house of Mrs. Lucy Thompson in Warrington, whom she describes as having the appearance of having been lately very sick, and as then weak and sallow. Persons are known to have visited more or less between the two places, and some have been employed in Pensacola during the summer. There is a possibility that the marines may have visited Pensacola, although there is no evidence that they did so.

There are quantities of equipment stores in the equipment storehouse, which have been in store for many years, and were probably there during the years 1867 and 1874, and have never been broken out and opened until this year.

It is ascertained by evidence that the marines' barracks, lately occupied by them, had at least one case of yellow fever in it in 1875, and there is a possibility that it has remained infected ever since.

A number of men have by necessity been employed on the harbor improvement jetties at Fort McRae, who belonged in Warrington and Woolsey, mostly the latter village, and have been in the habit of visiting their homes once or twice a week. These men have been at work handling ballast for filling mattresses and other labor, near to a large quantity of ballast, which is shown to have come from at least one of the quarantine ballast cribs, used by the Pensacola quarantine authorities during 1881 and 1882, and the Burns's crib at Live Oak is shown to have had ballast from an infected vessel discharged into it late in October, 1881.

On August 3d, Wm. Kelley, a laborer in the Equipment Storehouse, and on August 5th, E. P. Chaffin, storekeeper in the Engineer's Storehouse, which adjoins that of the Equipment, sickened with symptoms sufficiently suspicious in our opinion to be classified as yellow fever, although not so diagnosed by the attending physician. In connection with these cases, it is shown by the evidence of Kelley himself that he had come in contact with men from Fort McRae com-

ing home from their work weekly or semi-weekly, and that Chaffin visited him while sick before being attacked himself. It is shown that on the day Chaffin was taken sick, he was on a wharf in Woolsey, fishing with Mr. Wm. Langley, the son of Mrs. Langley, the grandmother of a child who was the first case of death by the disease; he was also a frequent visitor at her store in Woolsey.

The first case of death from yellow fever was Charles H. Thompson, a child of Mrs. Lucy Thompson, in Warrington, who died August 14th; the attending physician then believed the case to be inflammation of the bowels, but since, he has concluded that it was yellow fever. The funeral of this child was very largely attended by both adults and children of Warrington and Woolsey, by reason of which the disease was rapidly spread, more especially to the latter village. The house of Mrs. Thompson is situated on the principal street and thoroughfare of Warrington, and a lower room in it was used as an ice cream saloon, which was visited freely on Sunday evenings by the young people of the villages, including some of the marines. There was also a club-room on the same street, frequented by the marines and their friends of the reserve. On the evening of the eleventh of August, Private William Flaherty, of the Marines, complained of being ill, and on the twelfth was put on the sick-list; three days later his sickness proved to be yellow fever. It is shown by evidence, that on the evening of the eighth of August, he, with other marines, was in company with two men, Burkhardt and Ordway, at the club-room, when these two men were on their way to their homes in Woolsey from Fort McRae, where they had been at work handling ballast and had not changed their clothes, but wore them home through the streets, passing, among other places, the house of Mrs. Lucy Thompson, in Warrington; her child being taken sick on the tenth; feeling ill on the ninth. Her children are proved to have been playing on the side-walk at the time.

Having reviewed the evidence, we are now of opinion that the epidemic of yellow fever, now near its close, prevailing on the Naval Reserve, may be traceable to one or more of four origins, viz.:

1st. Possible infection from Pensacola by communication of persons, and by articles brought from that city.

2d. Articles in Equipment and Steam-Engineering Storehouse possibly infected in former epidemics.

3d. Possible infection of Marine Barracks since 1875.

4th. Probable infection from the ballast used and handled at Fort McRae jetties by men who lived in and visited the villages of Warrington and Woolsey weekly and semi-weekly in their working clothes.

Second: "Whether or not proper measures were adopted to prevent the introduction of yellow fever into the Navy Yard."

The first case of yellow fever having appeared in the Marine Barracks within the Navy Yard previous to the death of the first case in Warrington, and not finally diagnosed and decided to be yellow fever until three days after attack, any precautions that could have been taken at that time to prevent the introduction of the disease into the Navy Yard would have been unavailing, as the Marine guard and the surgeon himself were already infected.

THE YELLOW FEVER MICROBE.—Dr. Domingos Freire, whose researches into yellow fever were noticed before, has begun, according to the *New York Herald*, the practice of vaccinating persons with a culture of his yellow fever microbe attenuated by six transplantations in gelatine. Five out of six of the

first batch suffered slight symptoms of yellow fever, and the Doctor expressed his conviction that they will not be attacked again, or, if they be, will escape with a very mild touch.

YELLOW FEVER IN MEXICO.—Assistant Surgeon Main, under date of October 22d and 28th, states that yellow fever still continued at Guaymas up to the 15th October, about five cases, with an average of two deaths occurring daily. The disease was decreasing and would finish its course, it was thought, by the last of the month (October). At Hermosillo the fever was considerably less, only one or two new cases occurring daily, with but one death daily from all causes. No new cases appeared at Mazatlan, but there were many sick with intermittent and typhoid fevers. The Governor of the State of Sinaloa has issued stringent orders prohibiting the exhumation of bodies of those who died of yellow fever. In Culiacan the disease had nearly disappeared, and the people who fled were returning. In the villages near the mountains the fever was still doing much mischief and seemed to have abated but little; the reported mortality was two deaths in three cases. At one of the mines there were ninety-one deaths out of one hundred attacked. The disease had been carried to the mouth of the Colorado River on the coast of Sonora, and no town in that State is known to have escaped the disease. It is said that La Paz has had five thousand cases, but it is impossible to state the mortality; the fever, however, is reported to be extending through the State of Lower California with little change in its general character. The fever was carried by refugees to Tepic, a place of fifty thousand inhabitants located on the highway to the City of Mexico, twelve hundred feet above the level of the sea. The disease was not so severe at this place, due to the prompt manner with which it was met and treated. The authorities at once isolated the infected districts, burnt furniture, clothing, and everything liable to carry the germs; quarantine was established, and every patient with the disease was watched with suspicious care, while the doctors were active and untiring. At San Blas the epidemic was over, and every vessel touching there was kept in quarantine until all danger passed. At Acapulco a number of cases occurred, but no satisfactory statement can be made as to their severity, etc.

The governors of the Coast States have decreed that all available agents shall be used at the expense of their respective States for the relief of the needy and suffering sick, that all interments shall be absolutely free, and that charity funds be raised to aid in the work.

Yellow fever continues at Yuki and Atai, in Sonora, not far from the border of Arizona. It is reported there were 4,000 cases and 500 deaths. In Altata, Sonora, all employes of the custom house were down, and only two out of seventeen recovered; of 150 soldiers but 2 escaped the fever and 41 died. In Ixcallan, State of Oaxaca, a town of 13,000 inhabitants, yellow fever appeared with great severity, 35 new cases daily, mortality not stated. At Manzanillo, a city of 76,000 inhabitants, the fever averaged 292 new cases daily up to the 18th of October, mortality 11 in 100. Its principal interior commerce is with Guadalajara, a city of 210,000 inhabitants, and apprehension is felt it may be carried there notwithstanding quarantine is rigidly enforced, and all railroad enterprise and commercial relations temporarily suspended. In Jalisco the fever appeared among the cotton pickers, brought there, it is supposed, by peddlers, two of whom sickened and died there; five days after, the disease was declared epidemic, every workman being sick. On the railroad the entire force of 30 men was taken down and work

ceased. One case of yellow fever came to Bazos de St. Iago, and died there aboard the schooner Hattie, which sailed from Mobile. She is quarantined at Bazos, though no other cases appeared on board.

Assistant Surgeon Main adds a postscript, saying he had just received a telegram from Guaymas, dated October 26th, stating that yellow fever had broken out afresh at that place, and was alarmingly fatal, the report being that eight cases in nine die, and new cases rapidly occurring, with a large number of relapses.

YELLOW FEVER AT HAVANA.—Sanitary Inspector Burgess, in his abstract of bills of health, furnished vessels bound for the United States, for the week ending October 27, and reports inspections as follows: Am. schr. "Nonpareil," for Key West; Span. brig "Vilasar," for Charleston; Span. brig "Maria Teresa," for New Orleans; Span. brig "Guadalquivir," for Doboy, Georgia; Am. str. "Niagra," for New York; Am. str. "City of Alexandria," for New York; Am. schr. "Grover G. King," for Key West; Span. str. "Pedro," for Charleston; Span. str. "Apolo," for Savannah. The Spanish brigs "Vilasar" and "Maria Teresa," above mentioned, have been in port at a suspicious wharf discharging, the former twenty-five days and the latter thirty days. He regards them both as dangerous, notwithstanding disinfection by him before departure. He reports twenty deaths from yellow fever for the week.

YELLOW FEVER AT VERA CRUZ.—Sanitary Inspector Mainegra reports having inspected the following-named vessels up to October 28th: Str. "City of Alexandria," for New York; bk. "St. Cloud," for New Orleans; str. "California," for New Orleans; bk. "Chapman," for Galveston; bk. "Keewardin," for Mobile; str. "City of Mexico," for New Orleans; schr. "Seguin," for New Orleans; schr. "Forest Home," for Pascagoula; str. "Whitney," for New Orleans; str. "City of Washington," for New York. All the above vessels were in good sanitary condition.

QUARANTINE REGULATIONS AT GIBRALTAR.—The quarantine restrictions at Gibraltar have been somewhat modified, and the Board of Health of Gibraltar has made the following order, repealing all former orders in that behalf, viz:

"It being considered expedient to assimilate, as far as possible, the regulations respecting arrivals from the Brazils, to those in force in Spain, all arrivals from those latitudes with clean bills of health and health on board, shall, between 1st July and 30th September, be allowed to coal under strict quarantine regulations."

It has also been proclaimed that, "among other things ordered, any merchant vessel or boat from whatever part of the world arriving, shall, on sailing from Gibraltar, receive a bill or certificate of health, according to the circumstances of each particular case, from the Captain of the Port, or his assistants, in such form as shall be from time to time directed by any order or orders of the Board of Health of Gibraltar, any which certificate or bill of health such Captain of the Port or his assistants are thereby authorized and required to give; and further, that the order or orders from time to time made by the said Board of Health in pursuance of the said order of his late Majesty for carrying into effect the regulations and provisions thereof shall be duly published at Gibraltar by proclamation."

CONSULAR HEALTH REPORTS.—The U. S. Consul at La Paz, Mexico, in a letter to the State Department dated the 18th of October, says that prior to the date of previous letter (September 15th, ultimo), and during

the whole month of September the yellow fever in La Paz reached the highest pitch of its malignant effects, also on the coast of the Peninsula, and more so at Mazatlan and Guaymas. The mortality in La Paz for the month of September, was yellow fever 114, other causes 8. It is impossible to get an approximate number of the mortality which occurred at the towns of the upper and lower coast of Lower California, but I am sure of its being over 300. He says, speaking of furnishing weekly reports, "no accurate register has been kept by the authorities, and the members of the Board of Health deserted the city for the mountains to avoid the disease, besides we have been entirely without communication with the border States." The Consul, who suffered with yellow fever in September, adds that the disease was then (Oct. 18th) disappearing from the city.

The Consul at Mazatlan, Mexico, under date of October 13th, states that the Board of Health of that place declared the epidemic over, and that clean bills of health will be given to vessels sailing from Mazatlan from and after the 13th of October. Leading physicians pronounced the disease to have been bilious remittent fever.

Consular reports from Rio Janeiro up to the 29th of September, indicate a continuance of the epidemic of smallpox. There were 77 deaths from that disease for the week ending September 29th, in a total of 278 from all causes.

At Matanzas the yellow fever has about disappeared, only two cases having occurred during the week ending October 26th.

THE CHOLERA AT MECCA.—A despatch from London, dated November 5, states that there have been 240 deaths from cholera at Mecca in one week.

GEORGETOWN MEDICAL COLLEGE.—SURGEON-GENERAL JOHN B. HAMILTON, U. S. Marine-Hospital Service, has accepted the Chair of Surgery in Georgetown (D. C.) Medical College, vice Dr. Beale. It will be remembered that Prof. Hamilton temporarily filled the Chair of Surgery in Columbia Medical College, Washington, D. C., last year, during the absence of Prof. J. Ford Thompson in Europe.

OFFICE OF SURGEON GENERAL OF THE ARMY.—The question of filling the office of Surgeon General of the Army was not disposed of at the Cabinet meeting on Tuesday, as was anticipated.

ROYAL GIFT TO DR. GRANT, OF OTTAWA.—Her Royal Highness the PRINCESS LOUISE, before leaving Ottawa, presented DR. GRANT with a very handsome despatch box as a recognition of his kind services to her during her stay in Ottawa. It is rumored that a knighthood is also to be conferred upon Dr. Grant.

NATIONAL HYGIENIC CONGRESS.—The first session of a National Hygienic Congress was held in the city of Mexico on the 10th of October: it presented a petition to the Government, asking that an article be added to the Constitution, placing all sanitation in the power of the general Government, instead of in the States.

THE HEALTH OF THE ARMY.—The report of the Surgeon-General of the Army for the fiscal year ended June 30, 1883, prepared by the late Surgeon-General Crane, has just been made public.

Among the white troops, the total number of cases of all kinds taken on the sick list was 37,697, being at the rate of 1.802 per thousand of mean strength; total number of deaths, 214; total number reported to have been discharged the service for disability, 879. Among the colored troops, the total number of cases of all

kinds reported was 4,689; total number of deaths, 26; total number reported to have been discharged for disability, 101.

As an indication of the peculiar hardships to which the troops are exposed, the rates of admission for wounds, accidents, and injuries are 122 per thousand higher than those reported for the German army, and 142 per thousand higher than the decennial rate of the British army. The colored troops make a favorable showing in the small number of admissions for alcoholism and its results, exhibiting a rate of only 4 per thousand to a rate of 76 per thousand of mean strength among the whites. On the other hand, in diseases of the nervous system, they have an unexplained preponderance.

The additions to the library include 3,912 volumes and about 5,000 pamphlets, making the total number in the collection about 60,900 volumes and 68,700 pamphlets. It is believed that this library has now become of such importance and utility and is so widely consulted, that it should have the means of placing on its shelves as soon as published every new medical work, great or small, in all languages. Estimates for \$10,000 have been forwarded. To the collection of the army medical museum 638 specimens were added. Of these, 94 were purchased and 544 were contributions. The Surgeon-General renews the recommendation of his predecessor for a new fire-proof building for the army medical museum and library.

There are now 9 medical officers on sick leave of absence; of these, 3 have been found incapacitated for active service and recommended for retirement, viz., Assistant Surgeons T. F. Azpell, J. W. Buell, and W. R. Steinmetz; one has been recommended to be brought before an Army Retiring Board, with a view to his retirement from active service, viz., Assistant Surgeon Z. V. De Hanne, and three more are regarded as permanently disabled. Four medical officers are on ordinary leaves of absence after a tour of duty on the frontier, leaving 162 medical officers for duty on October 1, 1883.

THE REMOVAL OF THE REMAINS OF HARVEY.—The desire which has at times animated many Fellows of the Royal College of Physicians of London, and others, to remove the remains of Harvey from the position in which for some 226 years they had lain in the vault at Hempstead, Essex, to a more honored position, has at length been realized. On Thursday afternoon, the 18th of October, St. Luke's Day, the transference took place, with appropriate and reverential ceremony. It may be recollected that Harvey's death occurred when he was in his eightieth year, on June 3, 1657, and that the funeral took place on June 26th, when the body was attended far beyond the walls of the City of London by a long train of his friends of the College of Physicians, and the remains were finally deposited in a vault at Hempstead, some fifty miles from London, which his brother Eliab had built. He was lapped in lead, and on his breast, in great letters, was his name, "Dr. William Harvey." Where thus placed the coffin has since remained, together with the leaden shells which contain the remains of several other members of the Harvey family. The vault, some five and twenty years ago, was in a very neglected condition, and the leaden case containing Harvey's remains was suffering from its exposure to the elements, and possibly the inroads of the village boys. In 1859, Drs. Quain and A. P. Stewart visited the remains at the request of the College of Physicians, and found the leaden case full of dirty water, which had penetrated through a crack in the metal. The vault was afterwards made clean, and the open window securely barred, but the leaden case was not repaired.

The leaden case was roughly shaped in the form of a body, having a head, neck, and shoulders, from which it gradually tapered towards the feet, where it was turned up as if to receive the feet at a right angle to the body. At the centre of the body, the upper surface of the lead had collapsed, so that on the inner side the upper and lower layers of lead almost touched. The extreme length of the case from head to heel was six feet three inches, which must have been longer than was actually necessary, as Harvey is always described as having been of small stature. On the breastplate of the leaden case was the following inscription:

DOCTOR
WILLIAM . HARVEY .
DECEASED THE 3
OF JUNE . 1657
AGED . 79 . YEARS.

The condition of the coffin did not allow one to suppose that more than the skeleton remained in the case, and possibly even all that was not now preserved. In regard to the other leaden cases in the vault, one need not here dilate; except to say that most of them were in a better state of preservation than was that of the doctor; and that the two cases which lay immediately next to the doctor's coffin had been completely flattened by visitors to the tomb standing upon them when stooping down to read the above inscription on the breast of Harvey's case.

On January 28, 1882, the whole tower of Hempstead Church fell towards the southwest into the churchyard, fortunately without inflicting bodily injury on any person. Dr. B. Ward Richardson went down and examined the remains of Harvey. He found that the chapel had not been touched by the fall of the tower, but that the lead of Harvey's shell was going fast, and that there was water in the shell. This he reported to the Royal College of Physicians in February, 1882, showing them drawings and illustrations of the whole thing, and adding the suggestion that the remains should be raised to the Harvey Chapel above the vault, or brought to Westminster Abbey. A committee was formed at once to report upon the whole subject, and advise thereon, and it was decided to keep the remains at Hempstead, and remove them to the chapel above the vault. The necessary consent to this procedure was given. A marble sarcophagus for the reception of the leaden case was decided upon, and an architect was sent down to examine the state of the floor and vault, in order that the floor of the chapel might be sustained if necessary, in order to bear the weight of the sarcophagus and the leaden shell and its contents. Under his direction, pillars were built in the vault to strengthen the floor, and a plain sarcophagus, cut out of pure white Carrara marble, was constructed.

The following inscription was placed at the head of the sarcophagus:

WILLIAM HARVEY
BORN 1578
DIED 1657

The following was engraved on one side:

The remains of William Harvey
Discoverer of the Circulation of the Blood
were reverentially placed in this Sarcophagus by
the Royal College of Physicians of London
in the year 1883.

A leaden case was also prepared, in which might be placed the edition of the works of Harvey published in Latin by the Royal College of Physicians of London

in 1766, and edited by Drs. Akenside and Lawrence. On one side of this was engraved:

GVLIELMI HARVEII
OPERA OMNIA
EDITA
MDCCLXVI

On the other side was inscribed:

THE COMPLETE WORKS OF WILLIAM HARVEY,
DEPOSITED OCTOBER 18TH, 1883.

A memorial bottle, hermetically closed, was also prepared and wrapped in lead. In the bottle was placed a memorial, engrossed on vellum. The leaden case enclosing the bottle had inscribed upon it—

SCROLL.

Deposited October 18th, 1883.

The following is a copy of the memorial itself:

"The body of William Harvey laid in lead simply soldered was laid without shell or enclosure of any kind in the Harvey Vault of this Church of Hempstead, Essex, in June, 1657.

"In the course of time the lead enclosing the remains was from exposure and natural decay so seriously damaged as to endanger its preservation, rendering some repair of it the duty of those interested in the memory of the illustrious discoverer of the circulation of the Blood.

"The Royal College of Physicians of which corporate body Harvey was a munificent Benefactor and which by his favor is the possessor in perpetuity of his paternal Estate at Burmarsh, Kent, did in the years 1882-83 by permission of the representatives of the Harvey family undertake that duty.

"In accordance with this determination the leaden mortuary chest containing the remains of Harvey was repaired and as far as possible restored to its original state and on this 18th day of October 1883 in the presence of four representatives of the Harvey family and of the President, all the office-bearers, and many other Fellows of the College of Physicians, was reverently translated from the Harvey Vault to this Sarcophagus raised by the College for its reception and preservation."

A special train conveyed the office-bearers, Fellows of the College of Physicians, and representatives of the Harvey family to Hempstead, where a large number of persons were assembled. The President and the officials of the College immediately assumed their robes of office, and a visit was made to the vault to view the chamber and Harvey's shell with the other coffins lying there. Harvey's leaden coffin was then raised to the churchyard up an inclined plane made by placing boards over the flight of steps. The eight Fellows of the College who acted as bearers, Sir Risdon Bennet, Drs. Owen Rees, Quain, Sieveking, Richardson, Shepherd, Duckworth, and Moore, then ranged themselves on either side of the coffin, and carried it through the churchyard, and up the nave and aisle, into the Harvey Chapel. Preceding the remains of Harvey were the officiating clergymen, Mr. Eustace, Vicar of Hempstead, and Mr. Escreet, the curate. Following the remains was a procession which included the four representatives of the Harvey family, the President of the College, carrying the silver emblem of his office, the College officers in their gowns, and the Fellows of the College, conspicuous among whom were Drs. Acland and Paget, the Regius Professors of Medicine, in their scarlet robes; besides these gentlemen were Dr. Broadbent, Dr. Hubert Airy, Mr. George Eastes, and Mr. Stear. Whilst the procession was passing up the church, the dead march in *Saul* was played. A

service was then held, after which the remains of Harvey were lowered into the sarcophagus, and Sir William Jenner placed the metal case containing the scroll sealed in a glass bottle, and the metal box containing the copy of Harvey's works in a bottle, beside the leaden coffin in the interior of the sarcophagus. The vicar read the collect from the burial service ("O merciful God"), and concluded the service with the Benediction. The cover of the sarcophagus was placed in position after some little delay.

Thus within the last few years full honor has been done by Englishmen to the memory of Harvey. A noble statue, subscribed for by all classes of people, has been erected in his birth-place, Folkestone, Kent, and now the Fellows of his own loved College of Physicians have, with their own hands, placed his remains in a tomb which will for centuries demonstrate to the world the admiration which, in 1883, they entertained for the signal services rendered to Mankind by Harvey.—*British Medical Journal*, October 20, 1883.

A NEW DEPARTURE IN SOCIETY USEFULNESS.—On taking the chair at the Ophthalmological Society of the United Kingdom, MR. JONATHAN HUTCHINSON proposed that memoranda dealing with the treatment of many common affections of the eye should be prepared and issued to the members of the medical profession under the guidance of the Ophthalmological Society. In order clearly to understand the nature of the proposal, it is necessary, and will conduce to perspicuity, to discuss, first, the reasons for the issue of such memoranda; secondly, the method by which these documents should be distributed; and, lastly, why this kind of thing should be carried out rather by a corporate body than by other means. This subject, it will thus be seen, has to be treated from the points of view of theory, practice, and ethics.

There can be no doubt that a large number of cases of corneal ulcer do continually get worse mainly from the want of knowledge of the existence of simple remedies, and more especially of that valuable preparation the dilute yellow oxide ointment of mercury. Again, as Mr. Hutchinson urged, the number of instances of loss of sight from acute glaucoma which occur every year even now must be considerable, and this may be chiefly attributed to the lack of information regarding the proper time for the employment of iridectomy. Many excellent general practitioners do not realize the fact that, notwithstanding the presence of acute inflammation, the immediate performance of iridectomy is precisely the remedy, not only because the tension of the globe is thereby relieved, but also because the inflammatory state associated with the glaucoma must disappear by the same act. When we consider that it is hardly possible for the busy practitioner to have much time to devote to the acquisition of special knowledge of ocular diseases, and when we reflect on the amount of mischief and loss to the nation which annually accrues from such, in a measure excusable, lack of knowledge, we think enough has been put forward to show that the theory of Mr. Hutchinson's new departure rests on a sure basis. From the standpoint of ethics there can be nothing savoring of quackery in the carrying out of the scheme under the auspices of the Society. All individual names would be suppressed in the idea of the issue of instructions under the abstract title of Therapeutic Memoranda of the Ophthalmological Society, so that no accusation could be made against the proposal on this score. There is yet the further argument, also alluded to by Mr. Hutchinson, that advertising quacks may establish a lucrative business out of the knowledge of one or two simple remedies, which, however powerful in

doing good, are also probably for the most part powerless to do evil. Altogether, we think the suggestion of Mr. Jonathan Hutchinson is of considerable importance, and hope that the Society mentioned, and possibly other more or less special societies, may see their way to the adoption of his overtures.—*Lancet*, October 20, 1883.

THE VALUE OF KOCH'S RESEARCHES ON THE BACILLUS TUBERCULOSIS.—DR. BURDON SANDERSON, in a lecture recently delivered in the Museum of the University of Oxford, said that Koch's discovery of the bacillus tuberculosis would, beyond the possibility of doubt, serve as the foundation for an efficient prophylaxis against pulmonary consumption and the other less familiar forms of tubercular disease connected with it by community of origin and of issue.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending October 27, 1883, indicate that dysentery, consumption, diarrhoea, bronchitis, tonsillitis, influenza, and rheumatism have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending October 27, and since, at fifteen places; scarlet fever at eighteen places, and measles at five places.

OBITUARY RECORD.—PROFESSOR J. A. H. DEPAUL, Professeur Agrégé in the Faculty of Medicine of Paris, has recently died of pneumonia, after an illness of three days. Prof. Depaul was born in Pau, in 1811. At the age of seventeen he went to Paris, and after many hardships completed his medical course. He received the degree of Doctor in Medicine in 1840, was created Professeur Agrégé in 1847, Surgeon to the Hospitals in 1853, having been elected to the Académie and the Société de Chirurgie in the previous year. He devoted himself more especially to obstetrics and gynecology; his work in this department of medicine, and his position as a teacher, need only be mentioned. In 1862 he was called to the chair of Clinical Midwifery, which he filled until his death.

Among his better known works may be mentioned his *Traité théorique et Pratique de l'Auscultation Obstetricale* and his *Traité de Clinique Obstetricale*; the latter, unfortunately, remains unfinished. He founded and was the editor of the first obstetrical journal in France, the *Archives de Tocologie*, and was one of the collaborators of the *Dictionnaire des Sciences Encyclopediques*. Notwithstanding his age his professional and scientific work was kept up almost to the day of his death.

He was elected President of the Académie of Médecine in 1873, and upon the announcement of his death, at its meeting of October 23d, that body immediately adjourned, as a mark of respect to the memory of its distinguished member.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM OCTOBER 29, TO NOVEMBER 5, 1883.

MCKEE, JAMES C., *Major and Surgeon*.—Relieved from duty in the Department of California and assigned to duty as Medical Director, Department of the Columbia.—*Par. 5, S. O. 249, A. G. O.*, October 31, 1883.

PRICE, CURTIS E., *Captain and Assistant Surgeon*.—Assigned to duty at Fort Custer, M. T.—*Par. 1, S. O. 187, Department of Dakota*, October 25, 1883.